The RUBBER AGE

The Only Twice - a - Month Rubber Publication

VOL. XVI. JANUARY 25, 1925 No. 8

GENERAL TIRE & RUBBER PROFITS INCREASED 25 PER CENT IN 1924

A 50 Per Cent Increase Shown in Sales—Earnings Equal to 75 Per Cent, or $37.50 a Share on Common Stock —To Double Factory Capacity Within a Year

The General Tire & Rubber Co., Akron, Ohio, showed in 1924 a 50 per cent increase in sales, a 25 per cent increase in profits, and earnings equal to 75 per cent for the common stock. In other words, General common earned $37.50 a share as against less than half that amount shown the most favorable report of any other company for 1924. Besides paying all regular dividends on both preferred and common, the company paid an extra six per cent on common at Christmas time.

"There is a special reason for our favorable showing," said President William O'Neil in his report to the stockholders. "We do not make any more on an individual sale than any competitor, perhaps, but our fixed investment is held so efficiently low that this year we had nearly a fifteen time turnover of sales against fixed investment. It is not necessary for us as manufacturers to make a large percentage on each sale if we can repeat the sales against all our fixed investment better than once a month.

***Sales Totaled* $13,152,000**

"Sales for the year were $13,152,000, and the profit amounts to $1,500,000. The company that comes nearest to us in efficiency has a fixed investment so large that its sales were turned but three times during the year, to our fourteen. The fact that we have earned $37.50 for each share of common stock and have increased our surplus from $876,152 to $1,878,766, besides taking care of necessary expansion expenses, speaks for itself. We have absolutely no bank debt. The General Tire & Rubber Co. depends entirely upon dealers' business for its income, has been uniformly successful since the beginning, and has long been recognized as the leading company in its chosen field. General remains the only tire company that has never omitted a single dividend payment, in cash, since it began existence.

"Crude rubber is considerably higher than it was, but we were fortunate enough to protect ourselves with an ample supply at a favorable price. If we were so disposed we could shut down our plant for the next six months and make nearly as much money in crude rubber as we can from the manufacture and sale of tires. However, we shall go right on manufacturing and will make General tires better than ever.

"During the year there appeared what seemed to be a price cut on the part of a number of manufacturers. As a matter of fact it was not a price cut at all, for we find that the tires affected were

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MILLER CONSTRUCTING LOS ANGELES BRANCH

Ground was recently broken for a two-story brick building to be erected for the Miller Rubber Co. of California, at 949 East Fourth St., Los Angeles, to house a branch. The site has a frontage of 40 feet and a depth of 140 feet and has been leased from the Pioneer Paper Co. Under the terms of the lease, the building is being erected by the paper company to meet the requirements of the Miller company.

Akron Factories Busy

Rubber factories in the Akron district have speeded up production since the first of the year, when several were closed for the holidays and inventories. Goodyear was shut down for five days and Goodrich for two days during the inventory period.

Hundreds of new workers are being hired daily at the various plants here. For the most part only experienced men are being employed, labor directors report. Owing to the influx of men from the South, attracted by rumors of a "boom" in the rubber business, there is somewhat of a surplus in Akron of unskilled labor.

Daily tire production has already begun to increase as the result of large orders being received from automobile manufacturers and retail dealers all over the country. Spring dating orders this year are reported to exceed records for the past five years.

Tire manufacturers in the district are preparing to turn out more than 125,000 tires a day by spring, compared with the present production schedule of 100,000 tires a day.

It is a long time since rubber executives have been so optimistic over the outlook for the tire business. They expect new high records to be made in output and earnings of their companies.

Increased activity in the rubber business last year is indicated in the report of the Akron Clearing House Association, which shows bank clearings in 1924 were $40,000,000 greater than in the preceding year. Bank clearings were $399,027,000, as compared with $359,023,000 in 1923.

Published on the 10th and 25th of each month by Gardner Publishing Co., 225 Fourth Ave., N. Y. C. and Highland, N. Y. Address correspondence to N. Y. office. Subscription rates: Domestic, $2.00; Canada, $2.50; Foreign, $3.00.

Entered as Second Class Matter June 10, 1920, at the Post Office at Highland, N. Y. under Act of March 3, 1879. Advertising Rates Furnished on Application. Forms close 10 days before publication. Allow 14 days if proof is required.

GENERAL TIRE PROFITS INCREASED 25 PER CENT

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cheapened more than the difference in the rate. Eight ply tires were reduced to six ply. Six ply tires came down to five and four. Owing to our favorable position we did not find it necessary to cheapen General tires or take out plies. Our production costs were increased in order to make the tires better, during the time the trend seemed to be the other way. We believe that to be the only safe course in the end and we propose to stick to it.

"We regret that we lost a considerable amount in sales because of the limitations of the factory, which could not turn out tires as fast as the public wanted them, in spite of the fact that we had made three new additions to the factory within a year. Now, however, we have three more additions under way, and hope to be able to take care of all demands in 1925, because our capacity will be increased fifty per cent. Sales for 1924 were $13,152,000; profits $1,500,000, or eleven and a half per cent on the gross."

The officers were re-elected, as follows:—M. O'Neil, chairman of the board; William O'Neil, president and general manager; W. E. Fouse and C. J. Jahant, vice-presidents; T. F. O'Neil, secretary; Charles Herberich, treasurer; and W. J. Cahill, assistant secretary.

Acquires Paul Factory

The Carolina Rubber Co. recently took over the factory of the Paul Rubber Co., Salisbury, N. C., which has been sold at auction by order of Federal Court. The sale has been confirmed by Judge Webb. The new company will manufacture tires and tubes. Officers are Justus Collins, president; C. S. Monro, vice-president and general manager; George E. Rusher, secretary; and Z. E. Kitchen, treasurer. Albert L. Bell has been appointed sales manager. No stock will be offered for sale by the Carolina company.

Jones-Howlett Bankrupt

A voluntary petition in bankruptcy was recently filed in Federal Court, Brooklyn, N. Y., by the Jones-Howlett Rubber Co., whose factory is located at the foot of Court St., Astoria, N. Y. Assets are listed as $10,894, and liabilities at $21,717. The case was referred for action to Referee Edward C. McDonald.

Pneumatic Valve Patented

U. S. Patent No. 1,521,081 on a valve for inflatable rubber articles was recently granted to Joseph P. Dooling, New Haven, Conn. The valve comprises a casing with a longitudinal chamber closed at its inner end, a port in one side of the chamber near the inner end, an expansible port-closure seated in the inner end, a plunger bearing on this port-closure, and a screw-plug mounted in the outer end of the chamber. This screw-plug is adapted to force the port-closure inward, whereby it is expanded and the port closed.

RUBBER USED IN NEW DIVING SUIT

Specially prepared rubber is used in a new diver's dress, which will enable a diver to remain under water for one hour at a depth of 500 feet, the invention of a Wurttemberg engineer, Herr Gall. The suit is arousing great interest in German shipping circles.

A film, sponsored by the Bremen Chamber of Commerce, shows the invention to be a roomy suit of armour, with an enormous headpiece, containing signalling, maneuvering, measuring and lighting mechanisms, easily manipulated by the diver. The lower part of the trunk has space for compensatory and sinking weights. Specially prepared rubber renders the arms watertight.

Tests of this invention, it is said, have proved its value. It is thought its greatest use will lie in the pearl and sponge industries, although experiments will shortly be undertaken to decide its practicability in salvaging treasure from sunken ships.

Eagle Insures Employees

The Eagle Rubber Co., Ashland, Ohio, gave its employees group life insurance in The Travelers, Hartford, Conn., as a Christmas present. The insurance is paid for entirely by the company, and each of the 250 employees who has been with the company eight months or more receives the protection at once. There is $2,000 insurance for each officer and department head and $500 for all others with the company from eight months to one year, $600 for those more than a year but less than two, $700 for those more than two but less than three, $800 for those more than three but less than four, $900 for those more than four but less than five, and $1,000 for those more than five.

In case of permament total disability before age of 60, the full amount of an employee's insurance will be paid in equal monthly installments for a stipulated period.

For some time the Eagle Rubber Co. has provided medical attention for its employees and also maintained rest rooms. The adoption of group life insurance was a logical step in the development of its employment policy.

Open Premier Laboratories

It was recently announced by the Premier Mill Corp., Geneva, N. Y., manufacturers of the Premier Colloid Mill, that their new laboratories and demonstrating plant have been completed and are ready for service. The Premier Mill Corp. is ready at all times to make preliminary tests and demonstrations, free of charge, with particular materials sent them transportation paid.

Bulletins on specific industrial processes and products, as well as articles by recognized chemical experts on "Colloid Chemistry Applied to Industry", will be published from time to time.

COLONEL COLT'S ESTATE VALUED AT $5,198,966

The appraisal of the estate of Colonel Samuel Pomeroy Colt, Chairman of the Board of the United States Rubber Company, filed recently, shows that Colonel Colt, who died at Bristol, R. I., in August, 1921, left $5,198,966, $4,516,404 of which was in personal property. His New York estate was valued at $735,404, including real estate, works of art, jewelry, etc., stocks and bonds.

Colonel Colt's will contained no provision for his wife, Mrs. Elizabeth M. Colt, a separation agreement previous to his death having been entered into by the parties, whereby a life settlement was effected.

Ethel Barrymore Colt, a daughter-in-law, was given $25,000 in money and an interest, with her husband, Russell G. Colt, of $50,000. in the estate after the death of the last beneficiary. In addition, Russell G. Colt, received $100,000. in cash, one-sixth of the residuary estate, and an interest with his brother, Roswell G. Colt and his uncle, U. S. Senator Le Baron B. Colt, in half the residuary estate. Four grandchildren and eight nieces, grandnieces and grandnephews received bequests of $50,000 each. Roswell G. Colt also received $100,000 in cash and one-sixth of the residury estate. Countess Eleanor Moroni was given $50,000, and her husband, Count Moroni, $1,000. Twenty-five servants and two hundred and twenty-four employes of the Industrial Trust Co., Providence, received $1,000 each. The will also contained legacies for various charitable institutions and colleges.

Among the securities owned by Colonel Colt were 16,609 shares of United States Rubber common, valued at $821,107 and 100 shares of first preferred, valued at $8,975.

Packing Names Registered

The Garlock Packing Co., Palmyra, N. Y., has registered in the U. S. Patent Office eleven trade-marks which it is using on packing and packing material made wholly or from various combinations of asbestos, rubber, cotton, flax, copper, lead, iron and babbitt.

The trade-names and the numbers under which they are registered follow: Garlock Style No. 778, No. 193, 575; Garlock Style No. 777, No. 193, 576; Garlock Style No. 711, No. 193, 577; Garlock Style No. C81, No. 193, 578; Garlock Style No. 605, No. 193, 579: Garlock-188, No. 193, 580; Garlock-175, No. 193, 582; Garlock Style No. 117, No. 193, 583; Garlock-108, No. 193, 584; and Garlock Style No. 91, No. 193, 585. These trade-marks are not subject to opposition.

Tire Fabric Patented

Bert R. Blackwelder, Laporte, Ind., was recently granted Patent No. 1,520,925 in the U. S. Patent Office on a tire fabric consisting of metallic strands covered with frictioning material, overlaid in turn by fabric and rubber.

RUBBER SECTION, N.S.C., ANNOUNCES ACTIVITIES SLATED FOR COMING YEAR

Work Planned by the Various Committees is Summarized in Latest News Letter Sent to Members—Engineering Committee Engaged in Preparing Safety Code

The Executive Committee of the Rubber Section of the National Safety Council has been issuing several news-letters each year. The object of these letters is first, to keep the members of the Rubber Section in touch with the activities of its Executive Committee and with recent developments in safety and health work in the industry; and second, to serve as a medium of exchange and comparison of methods and items of interest to members.

The Executive Committee held its first meeting at the offices of the United States Rubber Co., New York City, on Thursday and Friday, Nov. 13 and 14, 1924. At this meeting the work of various committees was gone over and plans laid for the coming year. The following paragraphs briefly summarize the work and present status of the sub-committees as discussed at this meeting:

At Work on Safety Code

For the past year the chief activity of the Engineering Committee has been to help in developing a Rubber Machinery Safety Code. Because of the possibility of various states adopting conflicting standards on this subject it was suggested to the American Engineering Standards Committee that the best procedure would be to formulate a national standard code for rubber which would be complete in its scope, practical, and agreeable to all parties concerned. Such a code is now in process and the sub-committee of the A.E.S.C., which is sponsoring it, is composed of representatives of the rubber industry, state accident commissions, labor, electrical equipment manufacturers, the Bureau of Standards, leading engineering societies, and others interested in or connected with the work. Our engineering committee is represented on this subcommittee and is doing important work in the collection of data on which the wording of the new code will be based. All members of the Rubber Section should lend their interest and support to this work as it is of vital importance to every rubber manufacturer.

Tentative Program Arranged

The Executive Committee has agreed that in the past the Rubber Section activities at the annual convention have lost much of their usefulness and interest because of the lack of time for presenting papers and for round-table discussion. For this reason the tentative program for this year calls for meetings over a period of three days. This program as it stands at present is as follows: First Morning—Joint Meeting with Chemical Section; 1. Report of Committee on Benzol Poisoning; 2. Discussion. (Subject not decided); 3. Discussion. (Subject not decided); Second Morning—Rubber Section, 1. Appointment of Nominating Committee; 2. Reports of Committees; 3. Discussion (Subject not decided); 4. Discussion (Subject not decided possibly some mechanical phase of accident prevention). Third Morning—Rubber Section, 1. Report of Nominating Committee; 2. Reports of Committees; 3. Address (Subject not decided); 4. Address (Subject not decided).

The addresses and discussions have been left open as to subject. The Executive Committee feels that these can be made much more interesting and practical to the Rubber Section membership as a whole if subjects are chosen for which there has been an expressed desire from the members. For this reason, the committee will welcome any suggestions for subjects and will attempt to get speakers of authority for those subjects which seem to be most desired.

The committee has felt also that many of the discussions have been curtailed in the past because delegates do not always

(Continued on Page 246)

WHAT IS BISON SUPER-RECLAIM?

Some of our friends and competitors say it is just reclaimed rubber with crude added—

We thank them for the compliment

BUT

so far we have not seen it done.

It's milling and tubing qualities,

It's strength—1650 lbs.,

It's elongation—650%,

It's universal adaptability, cannot be obtained in that manner at the price of BISON.

U. S. RUBBER RECLAIMING CO., Inc.

100 E. 42nd. St., N. Y. Factories: Buffalo, N. Y.

"42 *Years Serving the Industry Solely as Reclaimers.*"

RUBBER SECTION, N.S.C. ANNOUNCES ACTIVITIES

(Continued from Page 245)

like to have their names, connections, and discussion appear in the printed proceedings of the convention. For this reason the committee is considering the use of cards at the next convention on which the questioner may write his name and question. At the close of the meeting these cards would be destroyed and neither the individual's name nor the company's name would appear in print. An expression of opinion relative to such a procedure has been requested from the members.

The Safe Practices Committee has done a great deal of excellent work in the past two years in the preparation of pamphlets on "Handling Materials," "Knife and Shear Accidents," and "Chemicals and Compounds." This year they are expecting a real pamphlet covering the prevention of accidents and methods of guarding in working with calenders.

The Bulletin Committee supplies the material from which the National Safety Council makes safety posters. If all members are not satisfied with the service they are getting or would prefer a different type of bulletin, they are urged to tell the chairman about it, give him suggestions with regard to hazards which are causing difficulty and help him with the preparation of the material.

Membership Steadily Increasing

The membership of the Rubber Section is steadily increasing but the Executive Committee is anxious to see the section grow still more rapidly. Every additional member increases its strength and usefulness to the industry as a whole. If any member knows of a company which has not joined the Rubber Section it would be good business to do a little campaigning. The N.S.C. is a non-profit association and can only increase the benefits received by increasing its own activities, increasing its sources of information, and broadening its field work.

The Executive Committee feels that through the medium of its publicity committee it has one of the best opportunities of getting published facts concerning working conditions in the rubber industry which would tend to dispel the idea which certain life insurance companies seem to have that many of the operations in the industry are "extra hazardous." Of course, such an opinion carries with it an extra premium and an additional expense to employees in the industry. Any information which members may have which would tend to disprove such a supposition will be received gladly by the committee which has been doing considerable work on this project and desires additional facts and data.

The Statistical Committee plans for this year to revise the forms used for reporting accidents. There has been considerable criticism of the forms in the past and it is believed that by a revision this service can be made much more valuable. All members are strongly urged to cooperate in this exchange of information. It should be remembered in this connection that no company names appear on the reports and all information is held strictly confidential.

To Continue Co-operative Work

The Health Hazards Committee will continue its co-operative work relative to benzol poisoning, possibly including in this year's investigation such other solvents as gasoline, toluol, and xylol. The results of their activities will be presented to the section in the form of a report at the next annual congress.

If members of the Rubber Section are not members of the American Society of Safety Engineers-Engineering Section of the National Safety Council, they should have the secretary write at once to E. A. Hoehner, the Firestone Tire & Rubber Co., Akron, Ohio, the representative of the Rubber Section on the Executive Committee of the ASSE-Engineering Section. Ask him for details and several application blanks. Members of safety and engineering departments will not be required to pay extra fees or dues for ASSE-Engineering Section membership. Members are men who have had at least ten years experience in safety or other engineering work and who in addition have been for five years in responsible charge. Associate Members are men who have had five years experience in safety or other engineering work. In either case, a degree from an engineering college is equivalent to two years experience. The activities of the ASSE-Engineering Section include the development of standards, researches, and codes, the promotion of safety education.

REPORTS LARGE RESERVE OF DUTCH NATIVE RUBBER

(Special to THE RUBBER AGE*)*

H. A. N. Bluett, British Commercial Agent for the Dutch East Indies, has just presented a report on the economic situation in his territory to the Department of Overseas Trade. The report is a noteworthy contribution towards a clear understanding of the Dutch native rubber problem.

Mr. Bluett has made an exhaustive study of the question while engaged upon an extended tour, covering over 2,000 miles in Sumatra (described in THE RUBBER AGE at the time). He confirms the statement that there has been a remarkable increase in native exports of rubber, which have been supplemented by increased European exports, since the compulsory restriction scheme was enacted, and he gives figures to show that of the total exports from the Dutch East Indies in 1921, 1922, and 1923, amounting to 73,402 tons, 103,456 tons, and 139,746 tons respectively, the native exports contributed respectively 6,000 tons, 25,000 tons, and 53,000 tons. This is equivalent to a ninefold increase in three years.

The main significance of Mr. Bluett's remarks, however, lies not so much in the increase that has already taken place as in the indication that native production is progressing on thoroughly sound lines, and that its potential amount is virtually unlimited. He estimates that of the 90 or 100 million native-owned rubber trees it is very doubtful if 20 per cent have yet been tapped. This means that the natives have an immense reserve of untouched bark, mature and immature, sufficient to cause a fivefold increase in their production. He adds that available land is still practically unlimited, and very clearly shows the progressively stimulative effect upon the native population of their new-found prosperity. He sees no reason why native planting should not go on increasing indefinitely.

This impartial view comes as a timely reminder that native production is actually a menace to the British producers, so long as it is encouraged and fostered by the screwing down of British exports and the stoppage of new planting in British areas.

THE VULCANIZED RUBBER CO.
Manufacturers of
HARD RUBBER GOODS
of Every Description
251 FOURTH AVENUE
New York

DIPHENYL-GUANIDINE
What properties do you look for in rubber accelerators? You will find them all in Diphenyl Guanidine. This master material has been a pioneer in giving complete satisfaction.
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DOVAN

BALLOON TIRES SEEN ON ALMOST EVERY CAR AT AUTOMOBILE SHOW

Out of 48 Passenger Cars Exhibited by 45 Manufacturers, 41 Offered Balloon Tires—258th Field Artillery Armory Magnificently Decorated for 25th Show

To the rubber manufacturer, the most interesting feature of the Silver Jubilee Automobile Show, held Jan. 2 to 10 in the 258th Field Artillery armory, New York City, was the fact that almost every car exhibited was equipped with low pressure tires.

Last year, when 65 manufacturers exhibited, 48 cars equipped with balloon tires were counted, in comparison with 41 cars using standard cord tires. This year, with 48 passenger car exhibits by 45 manufacturers, 41 were shown with balloon tires. Although most of the low pressure tires at the show last year were there as special exhibition equipment, 37 manufacturers exhibiting this year offered low pressure tires as standard equipment on all models. Five manufacturers used low pressure tires for standard equipment on some models; five offered them as special equipment; and one manufacturer offered balloons as optional with no extra cost.

Marked Changes in Chassises

Due to the widespread adoption of balloons, marked changes have been made in chassis structure. Treads have been widened half an inch in some cases to allow better clearance, front end suspensions have been rearranged, steering gears have been redesigned or special steering gears substituted for those formerly used when the car was shod with high pressure tires, king pins and drag links have been entirely changed to conform with the new tires. Snubbers, shock absorbers and other forms of spring stabilizers are now almost universally used with balloon tire equipment.

Great efforts were expended this year on the decorations. No exhibits were on view in the galleries, these being devoted to hanging gardens which harmonized well with the vaulted ceiling, covered with a blue cloth which formed a background for silver stars. The silver tower, containing the band stand, which symbolized the silver jubilee of the automobile industry, dominated the show and could be seen from all parts of the big armory. This tower was 75 feet high and enclosed 360 floods of multi-colored lights. Silver kiosks, statuary and pillars of light were to be seen at intervals about the floor. Artistically, as well as from the standpoint of business done, it was the greatest show the industry has ever enjoyed.

Large Display of Accessories

The most comprehensive exhibit ever staged of parts and accessories for the motor car was a feature. The exhibits included parts and accessories of all kinds, representing the latest in design and invention.

There were more than 140 parts and accessory exhibitors, 110 of them members of the Motor & Accessory Manufacturers Association, which cooperates with the National Automobile Chamber of Commerce in conducting the show. The exhibits included complete motors, bodies, tops, motor, chassis and body parts, accessories for the motor, body and chassis and tools and machinery for the private and public garage.

J. Hoerger, sales manager and assistant treasurer, A. Schrader's Son, Inc., Brooklyn, N. Y., was in charge of Space 316-317, where the company had a very interesting display of tire valves and accessories. A feature of this exhibit was the new ball foot tire pressure gage which has recently been perfected by the Schrader company. A monster illuminated moving model showing the action of a tire valve inside attracted much attention.

HOW COMPLETE IS YOUR LABORATORY ?

Mine contains every needed piece of equipment, lacking nothing to enable me to materially assist you in all your technical problems.

FREDERICK J. MAYWALD, F.C.S.
Rubber Technologist
5 William St. Belleville, N. J.

For the first time, the trade had an opportunity of viewing the exhibits and placing orders at the show, prior to its opening to the public. This gave manufacturers the opportunity to study the new offerings of equipment and parts. It is thought that the trade days feature will be repeated next year, as it is believed to have been a success. It served to attract many exhibitors to the show who had failed to take space in previous years because they considered the show of no particular trade value.

Barr Rubber Busy

According to Nelt Barr, president, the Barr Rubber Products Co., Sandusky, Ohio, recently found it necessary because of increased demand to increase its working force from 75 to 100. In addition to receiving a large order for rubber sundries and novelties from the United Import House, Amsterdam, Holland, the entire output until early summer has already been contracted for. The Barr company manufactures toy balloons, hydrometer bulbs, hollow rubber balls and druggists' sundries.

Paracord Organized

The Paracord Co., Johnson City, N. Y., was recently incorporated with an authorized capital of $100,000 to manufacture rubber soles. Incorporators are C. F. Johnson, Jr., H. E. Chrisfield and J. W. Matthael.

STOCKS

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Akron
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Cincinnati
Toledo
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St. Louis
Omaha
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Use More Zinc Oxide

Be Sure It Bears This Label

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STOCKS

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Boston
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Montreal
Chicago
Louisville
San Francisco
Los Angeles
New Orleans

BRITISH DISPUTE U. S. RULING ON GOLF BALLS

(Special to THE RUBBER AGE*)*

British golf ball manufacturers have been placed in a quandary by a statement said to have been made by the United States Golf Association that in January, 1926, it intends to introduce a golf ball differing in size and weight from that at present accepted as standard.

The present weight is 1.62 ounces, and the diameter is 1.62 inches. America, it is understood, proposes to increase the size to 1.68 inches and to decrease the weight slightly. The British governing committee has already given serious thought to the matter, and has recently discussed the matter at a special meeting in London. Although this meeting was private, it is known that it is not the committee's intention to fall in line with the American proposal. Should any alteration be decided upon it would be a much more drastic one, in which the golf ball might become very much lighter and a good deal larger even than that proposed by America.

It should be noted that the present standard size and weight was agreed upon at a meeting of the American and British committees. It is consequently felt in England that the American committee, in deciding to introduce a new ball a year hence without consulting the British committee, has acted somewhat hastily.

If this decision is carried out it will mean that British manufacturers, who export annually considerably over £200,000 ($1,000,000) worth of golf balls to the United States, will have to make a new type of ball for America. There is a heavy duty on golf balls sent into the United States, but this does not seem to have hindered the British export trade in this line.

The aim of the committees—in both countries—who have to deal with the matter has been to shorten the distance to which the modern golf ball can be driven, though it is true that it is only driven vast distances by the very few. British experiments have shown that the proposed American alteration will not materially lessen the distance of the drive. It is hoped that the committees will have an opportunity of getting together to consider the matter before any definite action is taken.

Tube Container Patented

A container for inner tubes was recently patented in the U. S. Patent Office under No. 1,520,481. William J. Rostern, New York, is the inventor. The container embodies two permanently formed compartments, each provided with an open end oppositely disposed and spaced from one another to permit the insertion of the folded half of an inner tube in each compartment in such a manner that the valve stem will occupy the space between the two compartments.

FIRESTONE APPOINTS MANAGER IN LIBERIA

The Firestone Tire & Rubber Co., Akron, recently appointed Chester A. Giles to direct its rubber plantation in Liberia, on the west coast of Africa. Mr. Giles has left his home in Minneapolis, Minn., to go to Akron where he will remain six weeks before embarking for Monrovia, the capital of Liberia. He will direct the opening of the Firestone rubber plantation, a concession which the Firestone company acquired some months ago.

To Increase Akron Output

Definite announcements have been made by the Goodyear Tire & Rubber Co., the Firestone Tire & Rubber Co., the General Tire & Rubber Co., the Seiberling Rubber Co., and the India Tire & Rubber Co. that they are preparing to increase their tire production from 25 to 50 per cent early this year. A total of approximately 100,000 tires a day is now being manufactured in the Akron district. This figure will undoubtedly be raised to 125,000 in the near future.

"Sorbo" Registered

Sorbo Rubber-Sponge Products, Ltd., Woking, England, have registered in the U. S. Patent Office under No. 137,554 the trade name "Sorbo". The name is used on shoe soles and linings for helmets and hats.

CARBONEX—

Merit explains increased sales

ONE tire company only was using Carbonex in 1922. Today, Carbonex is being used by twenty companies. And four of them are among the largest rubber manufacturers in the United States!

Here's how the increased consumption looks, charted:

1922 —
1923 ——————
First 6 mos. 1924 ——————

The use of Carbonex will reduce the cost of any rubber compound and greatly increase its strength and durability.

Write us for particulars.

The Barrett Company

40 Rector Street New York City

EMBOSSING CALENDERS

For Artificial Leather, Oil Cloth, Carriage and Automobile Covers

DRYING MACHINES

with Copper or tinned iron Cylinders for Cotton Ducks, Drills and Sheetings

The Textile-Finishing Machinery Co.

OFFICE, No. 83 EXCHANGE PLACE
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Highest Grade
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White, Brown & Black

150 Nassau Street New York

BAD WEATHER STIMULATED FOOTWEAR SALES IN N. Y.

A ten-inch fall of snow and subsequent slushy streets experienced in New York City recently did much to stimulate the sale of rubbers and other rubber footwear. New York tramped about in slush for more than ten days before the Street Cleaning Department completely removed the snow. The resulting rush for rubber and other protective footwear in the shoe trade was characterized by an official of a large jobbing house as the greatest in 15 years. Galoshes especially were in great demand, and as a consequence both wholesale and retail stocks are smaller than for a long time.

With supplies at the factories reduced to a minimum, another snowstorm of any size in New York will result in a famine in the market. The large sales of galoshes is attributed to the light type of pumps women have been wearing for some time.

Rubber Machine Patented

The U. S. Patent Office recently granted Patent No. 1,520,001 to Fernley H. Banbury, Ansonia, Conn., on a machine for treating rubber and other heavy plastic material. Mr. Banbury has assigned the patent to the Birmingham Iron Foundry, Derby, Conn.

The machine has a stationary casing with a charging opening in the top and a discharging opening in the bottom. A horizontally moving closure is provided for the discharge opening and a vertically moving closure for the charging opening. A neck with a chambered head rising from the casing provides a housing for the vertical closure. A hopper discharging into this neck and a rotor are also specified. A threaded stem is connected at its lower end with the vertical closure and extends upward through the neck and head. A nut, located within the head, is held against displacement and receives the threaded upper end of the stem. An annular worm-gear into which a worm-shaft meshes is mounted on the periphery of the nut.

To Make Rubber Toys

The Crown Rubber Co., Inc., New York, was recently incorporated with an authorized capital of $10,000 capital to manufacture rubber novelties and toys. Incorporators are H. Wartel, 1301 Fulton Ave., Bronx, N. Y.; and G. Berkson and R. Berkson, 1379 E. 12th St., Brooklyn, N. Y. R. Hillman, 297 Fourth Ave., New York, is attorney for the corporation.

Robinton Rubber Chartered

The Robinton Rubber & Chemical Mfg. Corp., New York, N. Y., was recently incorporated at Albany with an authorized capital of $12,000 to manufacture rubber goods. Incorporators are G. B. Robinton, 3969 Saxon Ave., Bronx; Max Zimmermann, 500 W. 135th St.; and Lewis Schwab, 3544 Broadway, New York. M. Swerling, 1829 Seventh Ave., is attorney for the corporation.

RUBBER PLANTATIONS' PROFITS ARE SMALLER

(Special to THE RUBBER AGE*)*

Considerably reduced profits are disclosed by each of the four latest rubber-growing concerns to issue its accounts. Three of these are enterprises operating in the Federated Malay States, and the fourth is a Java company (the Langen).

The dividend was lowered by two Malayan companies but maintained by the Java company. With one exception crops were smaller than for the previous period. The accounts of the Langen are made up to Aug. 31, and as the previous report stated that the company had adhered as from Nov. 1, 1922, to the voluntary restriction scheme agreed to by the majority of the British undertakings working in the Netherlands East Indies, the earlier period may have included two months of heavy production prior to the adoption of restriction. The effect of restriction on costs per lb. is shown in their rising tendency.

To Do Business in New York

The Omo Manufacturing Co., Middletown, Conn., of which F. E. Ferree is secretary, has filed a certificate of statement and designation in the office of the secretary of state at Albany to enable it to do business in New York. The company is chartered under Connecticut laws with a capital of $75,000 and manufactures dress shields, and other sanitary rubber products. The New York office is at 229 Fourth Ave.

Perfect Beads

Entire freedom from bead trouble in the construction of straight side tires is assured by the use of either National "(Patent)" High Tensile Strength, Flat Woven, Bead Braid or our new (Pratt Patent) Bead Cables. These cables, made to dimensions specified, have seven strands, yet only one piece of wire is used without soldered, welded or brazed joint.

Write for working samples of either National flat braid or Pratt cables (no charge to tire manufacturers) and full information as to our products and service.

Our engineering department tests beads and furnishes complete confidential reports as to their stretch, set and bursting point, without charge. Inquiries solicited regarding this special service.

National Standard Company
Niles, Michigan

Est. 1900 Inc. 1919

THE KUHLKE MACHINE CO.

Formerly Jones & Kuhlke

AUTOMOBILE TIRE MOLDS and CORES

GENERAL MACHINE WORK

Akron, Ohio

CARBON BLACKS

OF HIGHEST QUALITIES

Godfrey L. Cabot, Inc.

940 Old South Bldg. — BOSTON
611 Metropolitan Bldg. — AKRON

STOCKS IN

AKRON, BOSTON, CHICAGO, CINCINNATI, CLEVELAND, LOS ANGELES, NEW YORK, PITTSBURGH, SAN FRANCISCO, ST. LOUIS, TRENTON

AND PRINCIPAL FOREIGN CITIES

BRITISH MANUFACTURERS DEFEND RUBBER CORSETS

(Special to THE RUBBER AGE*)*

British rubber corset manufacturers have been quick to prepare and circulate an adequate reply to the defamatory utterances regarding their products made by Sir Bruce Bruce-Porter, the eminent obstretic specialist, and reported in THE RUBBER AGE.

The following are brief extracts from the reply published by the "Mysteria"* (rubber) Corset Co.:—

"It can be little more than twenty years ago that the medical faculty so vigorously assailed the vice-like type of corset of that day — and America came to the rescue with their epoch-making straight line corset innovation, which attained fashion's ideals, not by heavy boning, but by masterly cutting.

"And now woman's world is shaken by another startling denouncement by a prominent member of the British medical faculty.

"From the altogether misguided no-corset vogue of a year or two back, which had so deplorable an effect upon woman's figure, many ladies have swung to the opposite extreme, and have sought to hurry their figures back to fashion's lines by the use of corsets designed solely for a treatment purpose.

"Our flesh-reducing corsets have proved so unprecedented a success that makers of rubber goods, who have never cut a corset in their lives before have come into the market in the hope of capturing a little of the trade....But rubber, which may be good for hot water bottles or chest protectors, is entirely unsuited for the manufacture of corsets; nothing short of the purest Para gum rubber, is even safe for a garment which is to be worn so close to the skin — a point which has been strongly emphasized in our announcements.

"Rubber not scientifically purified provides a source of danger. It may set up irritation and inflammation; it may affix itself to the skin like a sticky tire patch, and have to be forcibly torn away. Garments made of such rubber are indeed the peril they have now been branded by the medical faculty.

"Further, it is unnecessary for rubber corsets to be worn next the skin to secure their flesh-reducing effect; we have always advocated them being worn over an under-garment. We have always offered our corset as a treatment garment to be worn five or six hours a day, although it is true that its comfort is such that many women wear them continually. And far from suffering ill effects the makers have innumerable letters of congratulation and thanks, not only from those who have benefited in a flesh reducing direction, but who have been relieved from persistene rheumatism.

"Fleetwood" Registered

"Fleetwood," used since Nov. 15, 1923 on inner tubes by the Fleetwood Rubber Co., New York, N. Y., was recently registered in the U. S. Patent Office under No. 193,898.

MORGAN & WRIGHT GETS VULCANIZATION PATENT

Adrian O. Abbott, Jr., Detroit, Mich., inventor of a vulcanizing system recently patented in the U. S. Patent Office under No. 1,521,851, has assigned the system to Morgan & Wright, Detroit, a subsidiary of the United States Rubber Co.

The system comprises a horizontal vulcanizing press for subjecting articles in molds to heat treatment, a set-up press for manipulating a number of molds, a track for transferring a batch of molds from within the vulcanizing press to the set-up press and vice versa, means for shiftably sustaining a batch of molds from this track, and means for locking the molds together to form a portable unit. The set-up press has fixed and movable platens, the former of which is in sections shiftable to opposite sides of the line of movement of the movable platen.

Directors Deny Charges

The suit recently filed in the Knox County Common Pleas Court, by James W. Huston of Devil's Springs, against the Mt. Vernon Rubber Co., Mt. Vernon, Ohio, asking the appointment of a receiver for the company and an accounting of funds, has brought a denial from the directors of the entire bill of charges. Mr. Huston alleges the waste of funds, mismanagement and unfair methods in the disposal of the stock. The directors have asked for an immediate hearing on the petition.

RECEIVERS' SALE IN EQUITY

In the United States District Court for the Eastern District of Pennsylvania, June Term, 1922. No. 2599.

VALUABLE PLANT

REAL ESTATE, STOCKS, BONDS, MACHINERY AND EQUIPMENT OF

THE HYDRO UNITED TIRE CO.

4th & Hanover Sts. **POTTSTOWN, PENNA.**

TUESDAY, FEBRUARY 10, 1925

AT 10 A. M. ON THE PREMISES

The sale comprises all of the property, except Cash and Accounts Receivable of The Hydro United Tire Co., and consists of—

REAL ESTATE: Carpenter Shop and Garage and Lot 72′x120′.

LEASEHOLD:

99-year lease on the plant of the Hydro United Tire Company with all of the modern improvements thereon erected.

BONDS: $240,000 Bonds, 1st mortgage 20-year, 6% Gold Bonds of the National Rubber Realty Company.

STOCKS:

65,005 shares Common Stock, 34 shares Preferred Stock of the National Rubber Products Co. Par $10.

MACHINERY:

Modern tire-making machinery, including Cable Braiders, Alan Seiving Machines, Hydraulic Presses, Standard Tubing Machines, Innertube Vulcanizers, Royale Tubing Machines, Rag Rolling Machines, Fabric Preparing Machine, Schofield Bias Shear, Mixing Mill, 3 Adamson & Farrell Rolled Calendars, Cameron Slitting and Rewinding Machines, Tire Building Machines, Buffing and Polishing Machines, Fitching Lay Hack Saw, Gear Shaper, Gisholt Boring Mill, Drill Press, large quantity of Motors from 5 to 250 H. P., etc. Sale subject to the confirmation by the Court.

By order of **JOHN P. HILL — EPHRAIM LEDERER —** Receivers.

McAVOY & BRAUDE, Esqs., Attorneys for Receivers, 419-23 North American Bldg., Philadelphia, Pa.

Full Particulars, Terms of Sale, etc., in Illustrated Catalogue, which will be mailed upon application to

SAMUEL T. FREEMAN & CO., AUCTIONEERS

1808-10 CHESTNUT ST., PHILADELPHIA **80 FEDERAL ST., BOSTON**

FORD EXPERIMENTING WITH FLAX AS COTTON SUBSTITUTE IN TIRE FABRICS

Tests Show New Product to Have Great Tensile Strength —Economies Effected in Growing and Harvesting would Result in Reductions in Cost of Making Tires

Experiments now being carried on by the Ford Motor Co., should they prove successful, will result in the substitution in tire fabrics of flax for cotton. It is claimed for the flax fabric that economies that may be effected in growing and harvesting would mean a substantial saving to rubber manufacturers who now use 24,000,000 square yards of cotton fabric a year.

In line with his policy of developing by-products, Henry Ford has been investigating the possibilities of using flax for something more than linseed oil and straw. From the results of the Ford experiments, it now seems certain that a fiber stronger than cotton and a cellulose for making paper may be produced from flax. The Ford company began recently in an experimental way to produce an artificial leather of which flax fabric is the base.

Tests show that the flax fabrics have a tensile strength of 110 pounds per square inch laterally and 139 pounds per square inch longitudinally, an average of 129½ pounds. This compares favorably with a normal tensile strength of 60 pounds per square inch for cotton. Engineers conducting the experiments see no obstacles to the adoption of flax for tire fabrics in view of its cheaper production and its technical advantages.

Crop is "Dew Retted"

Instead of following the Belgian method of treating the flax, which is to place it in water to rot off the gum-like substance that surrounds the fiber, the flax crop is cut, seeds on, and allowed to lie on the ground. It is occasionally turned by hand, if danger of seed sprouting occurs. This method is called "dew retting," retting being the trade name for rotting. This process is said to prepare the flax plant just as satisfactorily for separating as the Belgian method.

The flax is then run through a separating machine to remove the seeds and yields a body of clear flax fiber in addition to throwing out the chives. The fiber is next drawn into tows and spun into thread. Seeds and chives make linseed oil and cellulose paper backing respectively.

From this point on the process of spinning and weaving is similar to the cotton process. But inasmuch as flax can be harvested at much less expense than cotton, it may be recommended as a substitute for that fabric in tires. Flax requires practically no attention from the time it is sown until harvest. One mowing machine will cut as much flax as would be harvested by 100 negroes in a day.

Molding Process Patented

Merwyn C. Teague, Elmhurst, N. Y., was recently granted U. S. Patent No. 1,521,657 on a process for molding rubber articles. The process consists in mixing a compounding ingredient with rubber in the presence of water and oil. Proportions are such that the resultant mass is substantially dry to the touch. The mass is placed in a mold without drying, molded and then vulcanized. The American Rubber Co., East Cambridge, Mass., has been assigned the patent by the inventor.

Madison Tire Incorporated

The Madison Tire & Rubber Corp., Buffalo, N. Y., was recently incorporated to manufacture tires. Incorporators are R. L. Ball, D. M. Holl and M. Matthews, 813 Genesee Bldg., Buffalo.

What is Tar?

[For answer see our advertisements in the June 25, July 25, Aug. 25, Sept. 25, Oct. 25, Nov. 25 issues of THE RUBBER AGE*].*
Reprints furnished on request.

We can help you find the cheapest tar exactly suited to your needs.

Send us your specifications.

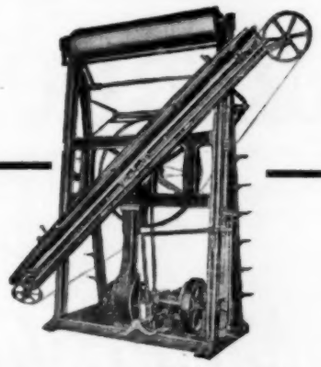
PENSACOLA TAR & TURPENTINE CO.
GULL POINT, FLORIDA

The largest individual producer of distilled pine products

Whether You Want—

To Sell Old Equipment
To Obtain New Help
To Get Additional Capital
To Buy a Plant or
To Secure More Machinery

You want to reach the rubber industry *without delay.* Moral—Use the Classified Columns of THE RUBBER AGE



THE BOLTON VERTICAL BIAS CUTTER

Accuracy with Speed

Cuts Cord or Flat Woven Fabrics with equal ease and precision.
Cutting range—¼" strips to 60".
Bias blocks—on any angle from 45 to 90 degrees.
In use in tire and rubber plants throughout the world.

SPADONE MACHINE CO., Inc.
15 Park Row NEW YORK, N. Y.

Foreign Representative
Francis Shaw & Co., Ltd., Manchester, Eng.

CRUDE RUBBER POSITION FAVORS THE PRODUCERS

(Special to THE RUBBER AGE*)*

Developments in connection with the rubber position continue to show a marked trend in favor of producers. London's stocks continue to shrink, deliveries continue large, and landings abnormally small. The present ratio of deliveries to landings is about three to one. In 1924 stocks shrank by 50 per cent. At the beginning of the year they were 60,000 tons; at the end of December they were about 30,000 tons — the lowest figure for over four years.

The question is frequently asked, "What is a minimum safe figure for the London stock?" This is answered by Symington & Sinclair, who say that a month's world consumption, or, say, 40,000 tons, would by no means represent an excessive supply. This is 10,000 tons more than now on hand in London.

Anticipating a consumption of 500,000 tons during 1925, with the unwieldy accumulations out of the way, a well-known Mincing Lane authority puts forward the estimate that the restricting areas will be called upon to provide 70 per cent of their crops—20 per cent more than at present permitted.

Early in 1923 fears of impending shortage following upon curtailment of output led to a burst of "panic" buying by American interests, the highest level touched being 1s.6½d. Thus the latest upward movement has surpassed the 1923 high level by ¼d (⅛ cent). Fair consignments have been engaged for export from the East and up to 1s.7d. has been paid for rubber afloat to New York.

While the mere fact of forward contracts being entered into does not necessarily constitute an incontrovertible guide to the future prices of the commodity, such contracts may be regarded as a fairly reliable "barometer." Consequently the announcement just made by the Monerakelle Rubber Estates that they have sold 36 tons of rubber (three tons monthly from January to December, 1925) is of interest to more than the shareholders immediately concerned. The fact this undertaking sold 170,407 lbs., at an average net price of 11.13d, up to June 30 last aptly demonstrates the strength of the present trend in favor of growers.

Kokomo Closes Branch

The Kokomo Rubber Co., Kokomo, Ind., recently closed its southern division at Louisville, Ky. Fred Knoefel has bought the branch and will act as an agent for the tire company. W. A. Harris, who was manager of the southern division, has resigned.

MILLER TO ESTABLISH A BRANCH IN FLORIDA

R. D. Abbott, manager of the tire development department of the Miller Rubber Co., Akron, Ohio, after making a survey of the state has selected Orlando for the Florida headquarters of the company. Mr. Abbott recently returned to Akron, leaving W. J. Zimmermann in charge of a fleet of cars and 18 men who are working on the branch.

GOODYEAR TIRE & RUBBER ACQUIRES RADIO STATION

The Goodyear Tire & Rubber Co., Akron, Ohio, recently took over radio station WJAX of the Union Trust Co., Cleveland, from which it intends to broadcast its own programs. Later the entire apparatus will be moved to the Akron plant and developed into one of the most powerful broadcasting units in the country.

The Goodyear company is one of the pioneers in the wireless field. Before the war it maintained a sending and receiving station at its Akron factory, one at its branch plant in Canada and one at its Detroit office. Plans were being prepared to put the Akron office in permanent wireless communication with all the branches when the Government as a war measure closed private stations.

Government radio officials visited Akron recently to sanction operation of a broadcasting station on a 390-meter wave length by Goodyear, and also to consider the proposed change in the station's call letters from WJAX to WEAR. The present wave length of WJAX is 390 meters. Although the Goodyear company does not at present manufacture any radio parts accessories, it is believed that the entrance of the company into broadcasting may lead to the manufacture of radio parts.

"Evernu" Heels Registered

The Evernu Rubber Heel Corp., New York, N. Y., has registered in the U. S. Patent Office under No. 197,265 the trade name "Evernu", which the company has been using on its heels since last May.

CABARRUS COTTON MILLS

M. L. CANNON
PRESIDENT & TREASURER

KANNAPOLIS, N. C.

Superior Quality Tire Fabrics

EGYPTIAN-PEELER
KARDED & COMBED
CORD & SQUARE WOVEN

CANNON MILLS, Inc.
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Representative

EXPERIMENTS SHOW POSSIBILITY OF PRODUCING CARBON BLACK FROM OILS

Tests Made by Department of the Interior with Electrical Process are Said to Have Proved Advantages—30 to 35 Per Cent of Output Used in Rubber Industry

The possibility of manufacturing carbon black from oils by an electrical process which possesses advantages over present methods of making this important industrial material by incomplete combustion of natural gas is indicated as the result of experiments conducted by the Department of the Interior at the Pittsburgh experiment station of the Bureau of Mines. Carbon black is a fluffy, finely divided black pigment produced by allowing the yellow flame of natural gas burning with an insufficient supply of air to impinge against a cool metal surface. Carbon black is used extensively in the making of printers inks, as a filler in automobile tires, and in the manufacture of stove and shoe blacking, phonograph records, black leather, typewriter ribbons, carbon-copy papers, carriage cloths, oil-cloths, linoleum, black opaque photographic papers, celluloid cement, wall tints and colors, marking inks and pencils, and artificial tile.

Legislation Prevents Greater Production

In certain States the decreasing supply of natural gas, and drastic legislation against carbon-black plants, have prevented the expansion that would be economically justified by the increasing use of carbon black in the industries and the gradual rise in price for the better grades of black. At present, Louisiana is the center of carbon-black production in the United States, and the black has to be shipped comparatively long distances to the chief markets, at freight rates that are high because of the bulkiness of the black.

In the course of investigations of the effects of high voltage electrical discharges on hydro-carbons, it was noted by the Bureau of Mines chemists that under certain conditions, natural gas could be decomposed and carbon black produced. The effects of several types of electrical discharge on natural gas and on liquid hydrocarbons and other oils was therefore studied by J. J. Jakosky, associate engineer, in order to ascertain the fundamental factors in the reactions. In the study of natural gas, the possible influence of these factors on the recovery of a larger part of the carbon content of the gas than is now possible was investigated.

In the manufacture of carbon black from oils, by the arc process developed by the Bureau of Mines, the two main essentials are a cheap electric power and cheap light-oil distillates. The process is suitable for noncontinuous or intermittent operation and could, therefore, utilize some of the cheap off-peak power available in practically all parts of the United States and in many foreign countries. Because of the abundance of cheap off-peak power in nearly all large industrial centers, carbon black in many places can be manufactured where it is needed, with a considerable saving in freight rates alone. Especially will this be true as to certain eastern States and as to foreign markets. Prices for second-class power differ considerably with local conditions, but enough off-peak power is available in well-scattered regions of this country at prices ranging from 0.01 cent to 0.05 cents per kilowatt hours. Power in many foreign countries is considerably cheaper.

In connection with the electrical manufacture of carbon black by the Bureau of Mines process, it is probable that the unsaturated gases produced during the decomposition of the oil may constitute profitable by-products if utilized for the manufacture of alcohols. Noncondensable gases formed in connection with the process are suitable for domestic fuel and could probably be sold in those localities where a market exists for domestic gas, thus reducing the total net cost of producing carbon black.

Uses of Carbon Black

About 20 to 25 per cent of the present output of carbon black in the United States is used in printing and the allied industries. The rapid growth of the automotive industry has created an extensive market for carbon black as a toughener in rubber. Addition of carbon black as a reinforcing agent has given greater elasticity and tensile strength to the rubber of rubber tires, and is said to have increased tire mileage 20 to 30 per cent. Approximately 30 to 35 per cent of the total output of carbon black in the United States is used in the rubber industry in the manufacture of automobile tires, hard rubber, electrical insulation, radio, and auxiliary high-frequency and high-voltage equipment, and so forth.

About 15 to 25 per cent of the carbon black made in the United States is exported for use in the same industries as in this country. Large quantities go to England, France, and Germany for rubber compounding and to Japan and China for manufacture into "India" and other inks, paints, and enamels.

Details of these experiments are described in Technical Paper 351, by J. J. Jakosky, copies of which may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. at a price of 10 cents.

Receiver for Fred Stern

Federal Judge Augustus N. Hand recently appointed Edward H. Childs receiver under $10,000 bond for Frederick Stern & Co., Inc., 277 Broadway, New York, crude rubber brokers. The receiver was appointed on the petition of Nostrand & Rademaker, on a claim for $1,000, C. A. Morse & Co., $500; and August S. Stauff & Co., $40. The corporation is capitalized at $1,000,000; liabilities are reported to be approximately $1,250,000. No estimates of the value of the assets was obtainable pending an audit of the books, but the belief was expressed by counsel in the case that the assets may aggregate $1,000,000. The petitioning creditors in the proceedings are represented by the law firm of Hays, Hershfield & Wolf. An examination of accounts was made after Frederick Stern, president, dropped dead January 2.

Raymond Quits Goodrich

The resignation of H. K. Raymond, vice president in charge of production at the B. F. Goodrich Co., Akron, Ohio, was announced recently by directors. Mr. Raymond has been in the service of the company for thirty years. President B. G. Work, who has been in Akron for several months, will assume the duties of acting works manager.

To Sell Knight Plant

The former plant of the Knight Tire & Rubber Co., Canton, Ohio, is being offered for sale by the Republic Rubber Company. The building has a floor space of 81,000 square feet, and is valued at approximately $180,000.

INTERNATIONAL PULP CO., *41 Park Row, New York, N. Y.*

SOLE PRODUCERS OF PURE **ASBESTINE** SPECIALLY PREPARED FOR USE IN RUBBER

Covered and Protected by Letters Patent Registered at U. S. Patent Office, Washington, D. C.

LIBERAL WORKING SAMPLE FURNISHED FREE

1924 EXPORTS OF RUBBER PRODUCTS SHOW INCREASE OF OVER $3,000,000

Rubber Footwear, Heels, Sundries and Specialties Were Shipped in Large Quantities—Tire Exports Fall Off—1925 Promises to be Favorable Year

The total value of rubber goods exported from the United States during 1924 will approximate $40,000,000, as compared with $36,972,170 in 1923, according to the Rubber Division of the Department of Commerce.

While this is in part due to higher prices for certain products, it is largely a result of increased shipments of waterproof rubber footwear, rubber heels, and rubber sundries and specialties of all kinds, which have moved abroad in increasing quantities during 1924..

Tire Exports Declined

Though the general trend of rubber goods exports during the past year has been upward, as compared to 1923, there are important classes of rubber products which were exported to a smaller extent in 1924 than in 1923. This is true of automobile tires, the chief product of the rubber industry. In 1922, 1,326,220 automobile casings were exported; in 1923, 1,362,741; and complete figures for 1924 will show the exports in that year to have totalled about 1,250,000.

Another product in which the United States exports were less in 1924 than in 1923 is canvas rubber soled footwear. One large American producer has used Canadian factories as a base for a larger share of their exports in 1924 than in 1923. If United States and Canadian exports of canvas rubber soled footwear are combined, the total for 1924 will be larger than for 1923, showing that American trade as a whole is holding its own in this product.

Footwear Trade Good

Except for the instances enumerated above, American rubber goods exports have shown a considerable improvement. Trade in waterproof rubber footwear has expanded, especially with European countries. Rubber heels and soles have been exported in record quantities, the Latin American countries being the principal markets. Druggists' rubber sundries of all kinds, rubber toys and all sorts of rubber specialties have become increasingly popular in foreign markets, and there appears to be room for still greater development in these lines.

In rubber sundries and specialties the quality of American products enables them to compete where in other rubber products price competition offers a more difficult barrier. The local market for novelties and specialties is so much larger than the local market of any other rubber manufacturing country that they are far behind us in these lines. Americans who cultivate export trade in such items should do so on a quality rather than a price basis, this being the soundest method of prolonged success in the trade.

Although exports of mechanical rubber goods, such as belting and hose, have registered only slight gains in 1924, they have maintained the advanced position which they first occupied in 1923. Rubber packing has shown a considerably increased trade during 1924, over 1,770,000 lb. being exported in eleven months, as compared with 1,564,492 lb. in all of 1923.

American rubber manufacturers can expect a favorable 1925 both at home and abroad. The constantly increasing number of cars in use creates an expanding tire market while a promised era of high industrial activity indicates an active market for belting, hose, and packing.

Tire manufacturers abroad who have benefitted from low values of their currencies are begining to lose part of their artificial advantage.

Register Packing Mark

A trade-mark consisting of a black stripe which is either painted on the diaphram or vulcanized in has been registered under No. 203,222 in the U. S. Patent Office by the Ralph B. Carter Co., New York, N. Y. The trade-mark has been used since last May on rubber diaphrams for pumps.

STANDARD FOUR TIRE EARNS LARGE PROFITS

According to A. E. Verner, general sales manager of the Standard Four Tire Co., Keokuk, Iowa, earnings for 1924 will show at the rate of 8 per cent on all outstanding preferred stock and 16 per cent on all outstanding common stock.

Additional equipment has been installed and is in operation in the tube department, which will enable the company to manufacture from 5,500 to 6,000 tubes a day. Plans are also well under way whereby the company will be in a position to manufacture 2,000 tires a day by early spring.

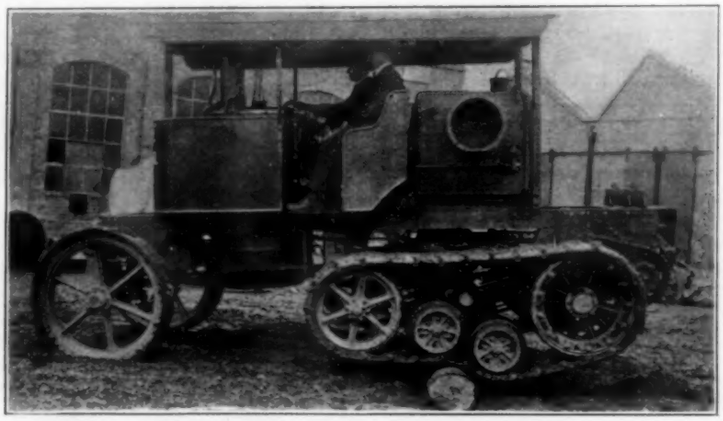
The outlook for 1925 is very promising, and with 35 per cent increase in tire production capacity and the doubling of tube production, the Standard Four company is anticipating the largest business in its history.

N. Y. Tire Dealers Dine

The Greater New York Tire Dealers' Association held a dinner-dance during Automobile Show Week at the Hotel Pennsylvania on Jan. 8. George D. Brown was chairman of the committee on arrangements and Harold P. Baran, president of the association presided.

Organize Siola Rubber

The Siola Rubber Corp., New York, N. Y., was recently chartered with a capital stock of 1,000 shares of preferred stock of $100 par value and 1,000 shares of common stock of no par value. The company will manufacture rubber goods. Incorporators are J. G. Squires, 310 W. 99th St., F. Persh, 1472 Wilkins Ave.; and A. Denner, 312 Schenectady Ave., Brooklyn, N. Y. Prince & Loeb, 19 Cedar St., are attorneys for the new company.



First Tractor Employing Rubber Tires

A new type of tractor developed by the Sentinel Wagon Co., Northern Midlands, Eng., employing rubber-shod bogies which ensure silence and allow the track to "absorb" bumps without lifting the vehicle as a whole. The tractor weighs approximately eight tons. Five years of hard experimental work in laboratory and testing shop are responsible for it.

PRODUCTION OF TIRES DECLINED IN NOVEMBER

According to the latest statistical bulletin issued by the Rubber Association, tire production declined in November, as compared with the preceding month. November production of balloon tires was 440,184 compared with October figures of 485,371; inventory is reported as 905,821, against 899,824 in October, and shipments were 440,584, against 454,117 in October. Production of low pressure inner tubes was 373,300 in November, compared with 429,244 in October; inventory was 886,066, against 887,417; and shipments were 409,939, against 402,103. These figures are the result of the reports of 52 manufacturers.

Production of cord tires in November was 1,771,805, inventory was 3,076,308 and shipments, 1,990,537. Both production and inventory showed decreases compared with October figures. Production of high pressure inner tubes was 4,226,841, a decline from October figures; inventory was 6,781,922, an increase over October, and shipments were 4,339,207, an increase over the preceding month.

In November 977,843 fabric casings were produced, as compared with 1,115,571 in October; inventory was 1,225,211; and shipments 928,662. Although shipments increased in November, the gain was not sufficient to offset a slight decrease in inventory. Production of solid and cushion tires was 49,349; inventory was 185,776; and total shipments in November were 49,748. Consumption of cotton fabric in November was 12,190,814 lb., compared with October consumption of 13,204,815, bringing the total consumption for 11 months up to 130,243,528 lb. Consumption of crude rubber in November was 39,812,268, a decrease when compared with the October figures of 46,045,252 lb. Total crude rubber consumption for 11 months was 414,889,300 lb.

Dunlop President Here

Sir Arthur du Cros, president of the Dunlop Rubber Co., Ltd., of England, was a visitor to the automobile show. "Dunlop Rubber is in a very strong position today," he said. "The rubber situation is much better than in some time. Owing to the improved business outlook, I expect Dunlop sales to break records in 1925. I do not look for very much change in prices. Our earnings in 1924 should be about 10 per cent ahead of 1923, with a similar gain for 1925."

Seek Achelis' Successor

The selection of the man to be elected president of the American Hard Rubber Co., to succeed Fritz Achelis, who died recently, is still in doubt. W. W. Weitling, first vice president, stood high in the esteem of Mr. Achelis, and might be considered a successor, but the son of the old president, Frank G. Achelis, might also be called upon by the directors. The factories in College Point, L. I., and Manhattan were closed on the day of Mr. Achelis' funeral.

COAST TIRE & RUBBER REDUCES TIRE PRICES

Contracts placed for crude rubber in Singapore by the Coast Tire & Rubber Co., Oakland, Cal., has enabled the concern to reduce slightly the cost price of their tires, it was made known this week at the company offices.

Shipments of rubber, including grades of smoke sheet, latex and roll brown will arrive from Singapore in gradually increasing monthly quantities, according to the contracts placed. This additional receipt of rubber will permit of increased production in both the tube department and the casing department at the factory, it is shown.

The piece work policy has been adopted in both of these departments. With this system in vogue, production has greatly increased. The output of the tube department has been doubled and the tire department shows a gain of one-third in production, with no increase in the working force.

Through the contracts direct with Singapore for crude rubber and through the adoption of the piece work plan of operation in the factory, The Coast Tire & Rubber Co. has been enabled to meet other reductions.

F. V. Glynn Promoted

The United States Rubber Co. recently announced that F. V. Glynn had been elected an assistant secretary of the company. Mr. Glynn will continue to act as secretary to Mr. Seger.

Keep up with the rubber industry

The coming twelve months will see the return of the rubber industry to a dividend paying basis. To follow the latest developments—news, market and technical—you should read every issue of THE RUBBER AGE.

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FISK RUBBER ASSIGNED TIRE-BUILDING PATENTS

Melvon A. Marquette, inventor of a method and apparatus for building tires, on which the U. S. Patent Office recently granted patents No. 1,519,545 and No. 1,519,546, has assigned the patents to the Fisk Rubber Co., Chicopee Falls, Mass. The first patent covers a method of making the casings by building up the carcass of plies of unvulcanized rubberized material with one or more partially vulcanized plies at the outside of the carcass. The casing is then vulcanized.

Patent No. 1,519,546 covers a device for use in shaping tire building material to an annular core. The device comprises a drum with a circumferential recess, an inflated bag supported in the recess and means for holding on the surface of the bag a strip of tire-building material for transfer to the core. The bag used is of a width and depth sufficient to permit it when pressed against the core to extend down the sides thereof.

Mr. Marquette has also assigned to the Fisk company U. S. Patent No. 1,519,547 covering a lubricant for preventing adhesion of rubber surfaces during vulcanization. The lubricant comprises liquid latex and mica.

Charles R. Wetsel Promoted

Charles R. Wetsel, assistant secretary and credit manager of the Miller Rubber Co., has been appointed Western sales manager, a position left vacant by the resignation of E. L. Schmock, who is now general sales manager of the American Rubber & Tire company, Akron.

"AUTOMOBILE INDUSTRY AT STANDSTILL IN ENGLAND"

Interest on both sides of the Atlantic has been attracted by a statement recently made by William O'Neil, president of the General Tire & Rubber Co., Akron, Ohio, in a recent public address in which he criticized the tax burden placed by the British Government on the automobile, and analyzed the failure of the motor car industry to develop in England. "A grave economic mistake is being made," declares Mr. O'Neil.

"In England it costs nearly $500 a year in taxes alone to own and operate a car of the Ford class, and from there on up. Such an imposition makes it impossible for automobiles to come into popular use. The car industry is practically at a standstill in England,—a country with 2,000,000 unemployed men. It is strange that the British Government has never seemed to sense a connection between the two,—nor sensed a cure for her industrial illness.

"If a similar tax burden were placed on the manufacture and use of automobiles in America today, the industry would practically stop. We should have immediately some 5,000,000 unemployed, and that number would increase to 20,000,000 in six months. England stands in her own light, in her attitude toward the automobile.

"If the taxes on car owning and operating were abolished or lowered to a minimum and the purchase and use of cars were thus encouraged, there would be a startling decrease in unemployment at once. There would be more and larger car makers, with many more employees; more agents and salesmen; more garages and repairmen; more handling of gasoline, tires and accessories, and thus the unemployed would be put at work. Wages would be created, every kind of business would be stimulated and government revenues from other sources would quickly increase to an amount much greater than the sum now derived from the various automobile taxes. As the situation now stands, the British throttle his great potential source of prosperity before it has a chance to function.

"Across the pond they seem not to have realized that quicker and cheaper transportation is an inevitable, inseparable companion of progress. Our own governmental mania for taxing everything in sight hampers the industry even here. Gasoline taxes in America are just as wrong, economically, as the similar and higher taxes on everything connected with the automobile in Great Britain.

"I firmly believe that one of England's nearest and best 'ways out,' of her present economic dilemma is to set the motor car free. A very great industry would soon grow up if that were done. English people want to ride just as much as Americans do, but not more than a very few can afford to own and operate automobiles under the present handicap. And because of official nearsightedness the whole public suffers."

BISHOP GUTTA-PERCHA TAKES OUT INSURANCE

Group insurance protection totalling $113,000 has been obtained by 82 employees of the Bishop Gutta-Percha Co., 420 E. 25 St., New York City, manufacturers of insulated wire and cable.

The insurance was issued by the Metropolitan Life Insurance Company on a cooperative basis whereby the employer and employees jointly pay the premiums. The coverage for individuals ranges from $1,000 to $3,000.

Supplementing the insurance contract are certain service features, such as free visiting nurse service and the distribution of health booklets.

To Enlarge Rotch Mills

Engineers from the office of Henry T. Main Co., mill engineers and architects of Boston, have been making a complete survey of the Rotch fabric mills in New Bedford, Mass. The mills were purchased about five weeks ago by the Goodyear Tire & Rubber Co., Akron, and the Fisk Rubber Co., Chicopee Falls, Mass., for the manufacture of tire fabrics. The new owners are contemplating extensive changes and improvements to the mills.

Stern Rubber Formed

The Stern Rubber Products Co., 70 Cherry Ave., Akron, Ohio, was recently incorporated with an authorized capital of $25,000. The company will manufacture and sell rubber products. Incorporators are A. B. Kaufman, Solomon Fred, Howard W. Ivins, T. S. Brandon and C. Donald Dilatush.

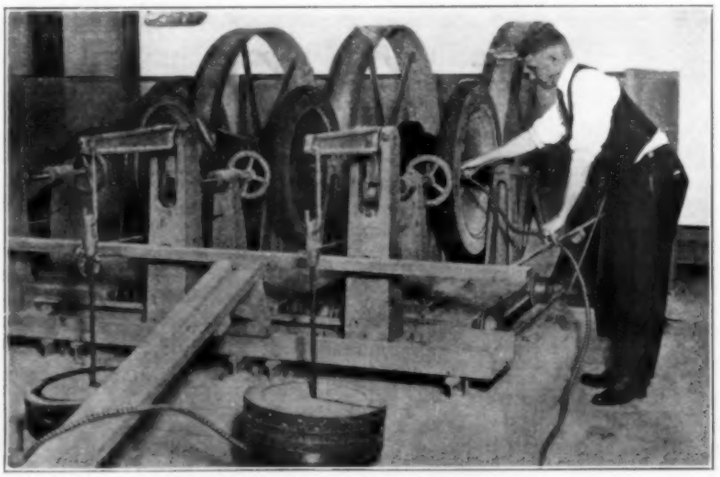


Photo P & A

Testing Tires at the Bureau of Standards

The Bureau of Standards in cooperation with rubber manufacturers has perfected a test for the durability of tires which may be completed in three or four days. The tires are run under working conditions against the rim of a wheel provided with bumps. After a specified period the tire is examined for signs of failure. Weak points that would not show up in service for six months or more are discovered in two days by this method. Tests are also made to determine whether the chemical and physical properties of the materials used are those required by the specifications and found by test to be necessary for durability.

GENERAL IMPROVEMENT EXPERIENCED BY BRITISH RUBBER TRADE IN 1924

Wet Weather Brought Record Demand for Rainproof Clothing —Use of Factice by Proofers Extended—Marked Revival Observed in Central European Piece Goods Trade

(Special to THE RUBBER AGE)

Business in the British rubber industry showed general improvement during 1924, and many branches which commenced the year under haphazard conditions are facing 1925 with great hopes of still better trade.

Among the outstanding developments of the year may be noted the introduction of the artificial silk waterproof coat, a marked revival in the Central European trade, an increased use of rubber tiling, experiments in rubber roadways, a heavy demand for rubber reducing garments, and a 10 per cent increase in garment workers' wages.

Wettest Year on Record

The clothing trade slogan during 1924 was "Sell waterproofs while the rain pours." And as the rain poured most of the time (the year was the wettest ever recorded) rainproofs and mackintoshes experienced a wide and heavy sale. It would probably not be far wrong to say that 1924 constituted a record season for the weatherproof branch of the trade. Many persons made a practice last year of purchasing two or three raincoats—a light cotton or union gabardine, for example, for showery weather, and a proofed mackintosh for country and rough weather wear.

At the beginning of the year, when domestic trade was slack, proofers managed to keep busy on piece goods for export, though profit margins were narrow at times. The boom, which began in June and lasted till well into the fall, meant overtime, night shifts, and deliveries rushed through at top speed. The big proofing establishments of Manchester strove their utmost to keep pace with the demand, but many found it quite impossible to do so and in consequence were forced to refuse much business offered them. Makers-up also received a constant succession of orders, mostly of a very urgent character. When the domestic rush showed signs of slowing up, manufacturers were kept fully occupied supplying an increased export demand. The fact that 80 per cent of the trade done during September and October by one of the largest wholesale clothing houses in London was in rainproofs and mackintoshes will help one to better appreciate the magnitude of the demand.

The juvenile trade in raincoats also increased in importance last year. The shortage of indianas and other light weights was one of the features of the raincoat trade. With the ebb of the boom in lightweights came orders for tweeds, double textures, and heavy winter proofings, while at the close of the year the trade was well booked up on goods for forward spring orders.

With proofers turning orders away, it was only natural that the use of substitutes for rubber in the waterproofing of cloths should have increased. In particular the use of factice was extended. Factice is manufactured from various kinds of vegetable oils, from rapeseed oil to corn oil, combined with sulphur chloride. The product is used as a waterproofer of cloths, automobile hoods, etc. For such goods it is claimed that factice is economical, as it reduces the solvent necessary, such as benzol, coal tar, and gasoline, and permits of more easy spreading on the cloth. Other uses for this rubber substitute include various hard rubber articles, bicycle tires, where it is found possible to use as much as 20 per cent in the side wall, and coverings for fire hose, conveyor bands, and belt frictions.

Deliveries Not Fast Enough

The garment trade passed through a period of stress early in the year, orders being rare and competition keen. When the rush set in garment makers almost tumbled over one another in their endeavor to supply the needs of the home market, and the result was that frequently business was lost when manufacturers failed to give lightning delivery. Work was chiefly on lightweight cottons, though fair quantities of silks, crepes, and artificial silks were also handled.

Probably the most striking feature in the year's export trade was the development of the Central European trade, particularly for piece goods. Various concerns reported good trade at the beginning of the year in Scandinavian countries and in the Far Eastern markets, while the piece goods trade with South America appears to have been good all the year round, and is still keeping up. Fair orders were shipped to British possessions, particularly Australia. The trade with Holland was good for part of the year, but France and Belgium proved disappointing markets.

A 10 per cent advance in mechanicals was agreed upon in November, 1923, the practical results of which were evident in 1924. There is no desire to abandon this increase. Although the mechanical trade cannot be described as good throughout the year, it compared favorably with that in many other important industries. Conditions were best early in the year, as it is usual to place most contracts at that period. Trade in all kinds of hose was good, and there was plenty of business in belting and washers, while railway contract work kept many concerns busy.

Besides the usual seasonal trade in sports goods, real progress can be reported in bathing caps and rubber toys of British manufacture. The pneumatic tire trade during the year was frankly bad and business in solids but little better.

No Settlement in Strike

Efforts at settlement of the wage with the striking employees of the Ajax Rubber Co. in its Trenton, N. J., factory at this writing had availed nothing. As a result of the walkout 800 of the hands are said to be idle. A grievance committee, composed of 12 representatives of the strikers, recently conferred with the management but no agreement was reached. The committee afterward notified the management that they would not return to work until the old method of computing the wages had been restored.

According to William W. McMahon, manager of the factory, the strike is due to a misunderstanding. Under the new system, it was explained, the workers will be paid for their individual efforts; under the system they will make from 78 to 98 cents an hour. Under the old system, it was said, the men averaged 90 cents an hour during a 44-hour week. The new maximum is higher than the old, it is claimed. The management does not consider the new schedule a reduction.

According to the grievance committee, the men insist that the new arrangement means a cut of $2.25 a day. The committee denied a statement that the men averaged $50 a week, saying that the average over the year is about $32.

As we go to press we learn that the strike has been settled and that all employees have returned to work.

Milwaukee Salesmen Dine

"The biggest year the rubber business has ever seen" was predicted for 1925 by speakers at the recent annual banquet of the sales force of the Milwaukee branch of the United States Rubber Co. The banquet was held at the Republican Hotel, Milwaukee, Wis.

H. T. Ott, manager of the Milwaukee office, was presented with a wrist watch and a gold pencil. James DeCrattery, who has been with the company since the Milwaukee branch was opened in 1913, also received gifts. Speakers included Mr. Ott, J. W. Durbin, sales service manager; J. W. Kerr, footwear manager; M. J. Pierce, mechanical manager; E. C. Dusold, tire sales manager; and M. J. Marty, clothing manager.

U. S. Declares Dividend

At a recent meeting of directors of the United States Rubber Co. a quarterly dividend of 2 per cent was declared on the first preferred stock. The dividend is payable Jan. 31 to stockholders of record at 3 p. m. Jan. 15.

FACTORY EQUIPMENT

Automatic Extinguisher Discharges 100 Gallons of Firefoam by Gravity

Practically every rubber factory employs some sort of dipping, quenching or spraying operation which uses inflammable liquids and thereby creates a special fire hazard. Dipping processes are widely used.

Most of these processes involve the use of tanks holding highly inflammable compounds. The more inflammable mixtures contain naphtha, gasoline, benzine and benzol. Almost equally hazardous are those processes where turpentine, kerosene, linseed oil, heated asphaltum paraffine and quenching oil are the inflammables.

Tanks Constitute a Menace

These tanks, with their drain boards, constitute a grave menace to the production program of the plants where they are found, unless every precaution has been taken against the start and spread of fire.

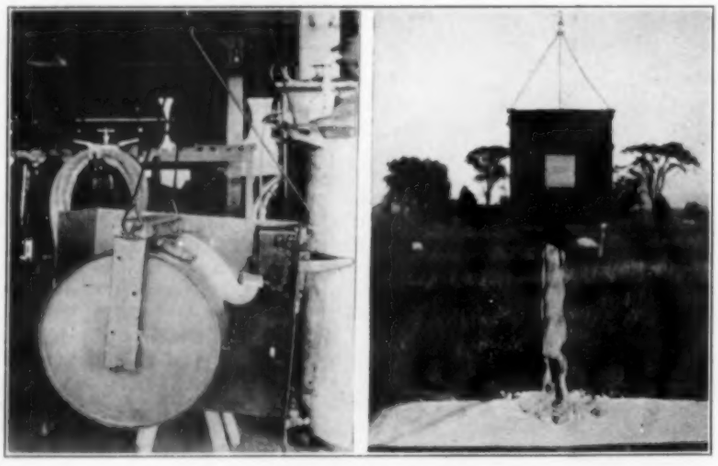
When fire losses showed that existing methods were inadequate or undependable, the research engineers of the Foamite-Childs Corp., Utica, N. Y., designed and perfected the Automatic Foamite Engine System. This system, incorporating the Lowe Release, was designed to provide positive, automatic protection for the entire dipping system, distributors being placed on tanks, drain boards and any other locations likely to be affected by the fire, ready to spread a protecting coating of Firefoam at the first flash of fire.

Shortly after the introduction of this system, there was a demand for an extinguishing device which incorporated the same principles of operation on a smaller scale, for the protection of isolated small dip tanks and other risks whose size did not warrant the installation of the Engine System.

To meet this demand, the Foamite-Childs engineers have just developed the Automatic Foamite Extinguisher, Model RT. This device, in outward appearance, is a 22 inch, red enameled cube, fitted with a three-point suspension for hanging over the risk. The interior contains a tumbler with a capacity of six gallons of each of the two Foamite solutions. The tumbler is set eccentrically on trunnions, and prevented from rotating by the Lowe Release. At the first flash of fire, the heat actuated device, operated on a rate of rise principle, causes the Lowe Release to trip the trigger holding the tumbler. The tumbler rotates, permitting the two solutions to combine in the mixing chamber and expand to eight times their volume in Firefoam.

The Firefoam generated has unusual extinguishing value, and it drops directly from the mixing chamber to the dip tank. By cutting off the supply of oxygen necessary to support combustion, the Firefoam puts the fire out and keeps it out. As the blanket of Firefoam stands up long after the fire is extinguished, there is no possibilty of reflash.

Exhaustive tests at the experimental laboratories of the manufacturers, over a long period and on various types of dip tanks and inflammables have proved this new Automatic Foamite Extinguisher to be absolutely dependable in operation. In test after test, the Lowe Release has operated in less than ten seconds, extinguishing the fire before it has a possibility of spreading to the overhead construction or surrounding room. The 100 gallons of Firefoam generated by the device is discharged in approximately one minute.

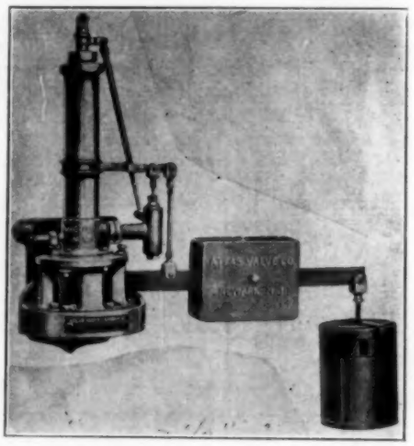


Automatic Foamite Extinguisher

At the left is shown the tumbler with the filling orifices and mixing chamber at the top. The Lowe Release is to the right of the tumbler, with the heat actuator below it. The view at the right shows the device in operation.

Victor Damper Regulators

The Victor Low Pressure Damper Regulator No. 1, manufactured by the Atlas Valve Co., Newark, N. J. demonstrates that for successful operation on extremely low pressures a damper regulator must necessarily be so constructed that it may be made more sensitive than necessary on the higher pressures.



Victor Damper Regulator

This regulator automatically operates the drafts of steam boilers and is so sensitive that it will operate on steam pressure changes of less than ¼ lb. Its operation is easily understood. Low steam pressure acting against a diaphragm causes the weights at the right to move upward when the pressure increases. With a decrease these weights move downward by gravity. Almost any degree of sensitiveness of the regulator is obtainable by shifting the weight at the left toward the end of its lever arm. The rising of the lever arm causes the "pilot valve" to open, admitting water, under pressure into the bottom of the motor cylinder and the piston is forced upward.

The company also manufactures medium and high pressure regulators. On the high pressure regulator, which is particularly adapted for use on boilers of the type used in the power plants of rubber factories, the damper control cylinder is operated in both directions by water pressure admitted through a pilot valve. A compensating attachment limits the travel of the control cylinder on intermediate pressure changes and permits the regulator to open fully or close the damper only on extreme pressure variations. This regulator is illustrated herewith.

CHEMICAL EQUIPMENT EXPOSITION PLANNED

Having in the last few months organized, with the endorsement of the American Institute of Chemical Engineers the first Chemical Equipment Exposition to be held in Providence June 22 to 27 inclusive, 1925, the Association of Chemical Equipment Manufacturers announces the inauguration of a six-months' pre-show campaign of publicity.

The association is comprised of makers of equipment used in the various chemical processes. It represents a physical valuation among its membership, all of which are American companies, of some $600,000,000.

Our Dependence on Chemistry

"It is statistically evident by an examination of American industrial production figures," said an official of the Association, "that more than one-half of the entire production of the country is dependent upon some one or more directly chemical process, requiring equipment, machinery, supplies, accessories and essential raw materials of the character that can be adequately defined only by the inclusive word of 'chemical.'

"American manufacturers in every line are more and more coming to realize that the production of most articles today involve not only mechanical fabrication, but chemical processes. Manufacturers as a whole are endeavoring to learn more about chemical equipment and its accessories and to come in closer contact with the chemical engineer and his knowledge of industrial chemistry."

The Chemical Equipment Exposition which the association has arranged is a part of its effort to enable industrial and technical men to develop both a sounder and wider knowledge of chemistry and industry. It will be held in the large State Armory in Providence and will favorably compare in size with the principal trade expositions of the country.

It is to be made a medium for the exchange of both technical and practical manufacturing information as well as for direct sales transactions involving equipment essential to the chemically controlled phases of any industry—whether one specifically termed "chemical" in current language or one subject to chemical control and dependent upon a chemical process at even a single point.

Public to be Barred

Public admission is absolutely barred at the Exposition so that technical men, general executives, purchasing executives, superintendents, laboratory and operating men, owners, etc., etc. of industrial enterprises may have entirely unhampered opportunities to study the relation of chemical processes to their production problems.

Men of the classes mentioned are being informed of the Exposition by individual invitation in cases where their names and company affiliations are known to the equipment manufacturers' Association; any man directly interested, commercially or technically, whose name is not known to the Association, is invited with equal emphasis, the Association announces.

The headquarters of the chemical equipment manufacturers are at 1328 Broadway, New York City. The Providence-Biltmore Hotel, headquarters for the Exposition week, and the Narragansett, Dreyfus and Crown hotels in Providence are making reservations for those who plan to inspect the exposition.

Hudson Elects Officers

At a recent meeting of directors of the Hudson Tire & Rubber Corp., Yonkers, N. Y. the following officers were elected: H. B. Seymour, president and general manager; E. P. Walsh, vice-president in charge of sales and treasurer; and R. H. Crumlich, secretary and factory manager. The company is asking its stockholders for $20,000. Each of the 1,300 stockholders is being asked to contribute $20; each stockholder who contributes to the loan, which is for six months, will receive a bonus of 100 per cent in common stock.

Inner Tube Patented

An inner tube and a method of manufacturing it, invented by John E. Glickert, Indianapolis, Ind., was recently patented in the U. S. Patent Office under No. 1,521,879. The patent has been assigned to the G & J Tire Co., Indianapolis. The method includes, successively coiling separate sheets of vulcanizable rubber about a pole with the sides of each sheet overlapping on substantially parallel lines spaced apart circumferentially of the pole. A valve base is placed in the rubber substantially symmetrical in relation to the seams formed in the respective overlaps. The tube is vulcanized to form means for controlling the position of a valve stem adapted to be mounted therein.

AMERICAN HARD RUBBER REGISTERS TRADE-MARKS

The American Hard Rubber Co., New York, N. Y., has registered in the U. S. Patent Office seven trade-marks used on hard-rubber combs. The trade-marks and the numbers under which they are registered are as follows: Rialto, No. 204,145; Milady, No. 204,146; Mayfair, No. 204,147; Caprice, No. 204,148; Wavo, No. 204,149; Iris, No. 204,150; and Pandora, No. 204,151.

24,380 TONS OF CRUDE IMPORTED IN DECEMBER

Importations of all grades of crude rubber in December totalled 24,380 tons, according to statistics recently issued by the Rubber Association of America. Compared with November, when 28,660 tons were shipped to the United States, this is a decrease, and also shows a decrease when compared with December, 1923, in which month 27,871 tons were imported. Total shipments of plantations in December, 1924, were 22,595 tons, of which 8,668 tons were shipped from Singapore; 3,497 tons from Belawan-Deli; 2,373 tons from Colombo; 2,351 tons from London; 1,807 tons from Penang; 1,269 tons from Pt. Swettenham; and 1,099 tons from Batavia.

Shipments of Africans were 268 tons; Centrals and Guayule, 183 tons; and Paras 1,334 tons. A total of 424 tons of miscellaneous gums were imported; 66 tons of balata; and 89 tons of waste. Shipments to New York totaled 20,303 tons; to Boston, 1,247 tons, to Baltimore, 590 tons; and to Philadelphia, 277 tons. Shipments to Los Angeles were 172 tons; and to Seattle, 6 tons.

Details of the crude rubber shipments to the United States for 1924 are given box below.

IMPORTATIONS OF CRUDE RUBBER BY MONTHS FOR YEAR ENDED DECEMBER 31, 1924

Month	Plantations	Paras	Africans	Centrals	Guayule	Manicoba and Matto Grosso
January	20,611	731	141	88	—	—
February	29,977	1,501	192	93	—	—
March	16,009	980	663	33	67	—
April	41,438	686	139	9	164	—
May	22,466	1,176	70	17	185	—
June	16,310	737	46	115	132	—
July	18,390	1,199	170	43	167	—
August	18,397	1,014	567	6	92	—
September	28,362	123	263	85	167	—
October	34,073	2,172	613	157	142	—
November	26,427	1,226	597	237	167	6
December	22,595	1,334	268	121	62	—
TOTALS	295,055	12,879	3,769	1,004	1,345	6

GRAND TOTAL—314,058 long tons

By Months (All grades)

January	21,611
February	31,763
March	17,752
April	42,436
May	23,914
June	17,340
July	19,969
August	20,076
September	29,000
October	37,157
November	28,660
December	24,380
TOTAL	314,058

Arrivals of Plantations by Ports for Year 1924

Baltimore	5,689
Boston	8,398
Los Angeles	5,097
New York	274,153
Philadelphia	1,652
Seattle	66
TOTAL	295,055

RUTHERFORD TALKS OVER SEVEN RADIO STATIONS

A radio address was delivered at 10.00 P. M. Tuesday January 6th, by William O. Rutherford, president of the Rubber Association of America, and vice-president of the B. F. Goodrich Rubber Co., Akron, Ohio. It is estimated that over 2,000,000 homes have radios and listen to the following stations which transmitted this message: WEAF, New York, WEEI, Boston; WFI, Philadelphia; WGR, Buffalo; WCAE, Pittsburg; WJAR, Providence.

Mentions Auto Show

"Ladies and gentlemen of the radio public," said Mr. Rutherford, "I have come directly to the Broadcasting Station of the American Telephone & Telegraph Co., WEAF., from the New York Automobile Show. An Automobile Show is very important to a rubber manufacturer for he must keep a watchful eye on automobile development constantly. I have watched the progress of the motor car for over a quarter of a century.

"Tonight I saw a wonderful array of fine cars at the Show — beautiful and efficient mediums of transportation. As I walked from booth to booth I was impressed with the additions and new features that are on all the models. Each addition gives us new comfort, safety and economy.

"The motor car has become our greatest system of transportation — a world wide system of personal transportation. It has brought transportation into the homes and made it as personal to all of us as our kitchen stove or our living room davenport. We think nothing of starting anytime, day or night to go wherever need calls or our fancy wills.

Importance of the Rubber Industry

"This New York Show brought home to me the importance of the rubber industry which I represent, in this vast development. Without the pneumatic tire the motor car would never have been possible. With the development of the balloon tire, additional comfort and economy have come. And let me say that rubber plays an important part also in the everyday life of all people. There is no time, day or night when your convenience and safety, health and entertainment are not dependent upon rubber. Our world could not endure without this basic material. The very radio that sends you information and amusement owes its debt to rubber. Men interested in motor car manufacturing are gathered here this week for this great show. They are something more than just manufacturers — they are developers of a great system of service in which public good will and convenience are uppermost in their minds.

"The Goodrich company recognizes that a system lives entirely by the good will of its public and that is the purpose of the Goodrich Silvertown Cord Orchestra. This orchestra is not for the purpose of advertising or publicity as far as our company is concerned. It is our contribution to radio listeners that they may enjoy the highest type of dance music in their homes.

"In closing, let me speak briefly of the coming year. We have turned the corner into 1925 and my observations are that underlying business conditions in industry are sound and encouraging. Business, generally seems to have profited by its experiences in the past several years of over-inflation, with the result that both manufacturer and retailer are keeping production in better balance with his sales. The farmer is now coming into his own and in 1924 his purchasing power increased over $750,000,000.00 and for the first time in several years the price of farm products and that of manufactured goods are very nearly on a common level. I see the United States as the great money lender of the world and because of our loans foreign business is certain to be on the up-grade. America is doing right by co-ordinating her railroads with her highway motor bus transportation system. This will lead to just one thing and that is a sound basic foundation for future prosperity.

"If all industry will be careful not to over expand, each of us should prosper. I, personally, believe 1925 holds forth great possibilities for the United States of America — Our Country.

"I thank you."

Compound Patented

Morris L. Weiss, Belmar, N. J., was recently granted U. S. Patent No. 1,521,739 on a vulcanized compound, having as an ingredient before vulcanization an aromatic disubstituted guanidine dibenzyldithiocarbamate. The patent has been assigned to the Dovan Chemical Corp., Wilmington, Del.

INFORMATION EXCHANGE

Additional information from our readers on the inquiries below will be welcome.

(Reference No. 128) We are planning to manufacture a product which will require rubber thread and tubing. Can you supply us with a list of manufacturers of both rubber thread and rubber tubing?

* * *

(Reference No. 129) We have in stock about 500 barrels of a rubber wax which had been used as a rubber substitute during the rubber shortage. We are anxious to know if there is any manufacturer who would care to consume this lot. The material is in the form of soft gummy wax, and is golden brown in color.

* * *

(Reference No. 130) Please put us in touch with an engineer who specializes in designing forms for toy balloons and other thin rubber goods.

* * *

(Reference No. 131) We note in THE RUBBER AGE that you quote in each issue Colombo Scrap No. 1. Inasmuch as we use this grade and are desirous of locating a good source of supply, we would appreciate it, if you put us in touch with companies who can supply us.

PRODUCTION OF NEW HEEL BEGUN BY AUBURN RUBBER

The Auburn Rubber Co., Auburn, Ind., recently began the manufacture of a new rubber heel which is claimed to have many advantages. The new product has been named the "2-Life Heel" and is made with the wear surface of durable, lightweight rubber, surrounded by ordinary heel stock. It is said that the use of ordinary heel stock for the edges of the heel enable it to be trimmed and buffed to exactly fit the leather heel base. The heel is sold at a slightly higher price than other rubber heels.

To Hear Panther Case

Ex-United States District Attorney Robert O. Harris was recently appointed master to hear the case and adjust damages in the suit of the Panther Rubber Co., Boston, Mass., against the Barrett Co. of New Jersey and Maine.

The Panther company alleges that its business of manufacturing rubber heels was going on splendidly until the Barrett Co. induced the Panther company to use certain oil which it supplied. According to the allegations of the Panther company, this oil proved very inferior and caused the rubber company a monetary loss of about $1,000,000, which it is trying to recover by suit in the Federal Equity Court.

Feinburg Vindicated

As a result of an investigation made by the Post Office Department, the complaint against David Feinburg Co., 11 Broadway, Chelsea, Mass., scrap rubber dealers, has been dismissed. Inspector B. S. Hall recently wrote to the Feinburg company as follows: "Referring to the complaint made to this office that you were using the mails to defraud in selling worthless tires, I beg to advise you that the investigation disclosed no evidence of such a scheme or of any fraud.

The David Feinburg Co. has always conducted its business in an honorable manner since its organization in 1911.

Three Tires Registered

Three trade-marks for tires were recently registered by the Overman Cushion Tire Co., Inc., New York, N. Y., in the U. S. Patent Office. The trade-marks are "Flexy," Ser. No. 205,530; "Supermatic," Ser. No. 205,351; and "Flexo," Ser. No. 205,352.

J. D. Wiggins Retires

J. D. Wiggins, due to the condition of his health, recently retired as president of the International Rubber Co. of America, Anderson, Ind. He has been succeeded by B. B. Benner. The company has announced a new tire called the "Longwear Black Beauty," constructed of 15 ounce cord. The company says this tire "is made on the basis of the tire manufactured three and four years ago." The customary red band used to identify the Longwear is not used on the Black Beauty which is an all black tire.

"Rubber Manufacturers are Sales Crazy"

James H. Stedman, in a Letter to The Editor, Says Price Cutting in Flooring Trade is a Grave Menace

[*The following interesting letter was read in part by Merton A. Turner, vice president of the Stedman Products Co., at the annual meeting of the Rubber Association of America.—The Editor.*]

Editor, THE RUBBER AGE:

Your letter of Dec. 10 has been in my brief case that I might answer it while traveling about the country, which I am doing in an effort to corral a fair share of the prosperity you speak of in the rubber industry.

I think my point of view on present conditions is not, perhaps, one that you would care to publish as I frankly fee' that the rubber manufacturers of the country as a whole are sales crazy. Anything to get business at any price, apparently regardless of a net profit. I am fairly in touch with two divisions of the industry, one, reclaiming being a division which dates back almost to the beginning of rubber manufacture.

Reclaimers Unable to Make a Profit

In the past year the reclaimer has had so great price cutting competition that he has been unable to make a profit even on a substantial tonnage turnover. Selling good quality tire reclaimed stocks as low as 7c a pound and many cases extending terms over 3, 4 and 5 months period has meant only one thing—*Red Ink* if his overhead costs are properly placed on his reclaiming department and not charged to some other department for the sake of showing a bookkeeping profit on reclaiming. There is no doubt that more reclaiming equipment is available by probably fifty per cent than is necessary to care for the present demand, but why do business for nothing?

The other division of the industry and the one in which I am most interested is the wonderful development which has come in the last four years in the use of rubber reinforced with cotton fiber for floor covering. In our own development we have seen a twelve-fold increase in 1924 over 1921. A conservative estimate would show at least two million square feet of this material sold this year in which has been used close to five million pounds of rubber compound of which perhaps one million pounds would be crude rubber. It is the lusty infant of the rubber game and will, if properly handled, assume a place second only to tires in a few years. But, and here comes the wrecking car, instead of trying to build a quality that will merit consideration by careful buyers at a fair price, the whole desire seems to be (with the exception of but two or three manufacturers) to make something of decidedly inferior quality and to sell it at a price that brings no return even on a poor article and worse still, gives the budding development of what is a real thing a black eye.

People want rubber floors when they come to know them if the floors are properly made and carefully laid, but if the reverse condition prevails the goose is going to be killed when she has just started laying. The price cutting competition in this field indicates lack of knowledge of costs of manufacture and is a most serious menace at the present time. Is it not about time that some of the men who are responsible for the vast capital invested in the industry got together and stopped this price cutting nonsense? Is it not about time that we cease playing business politics and got down to cases even though your volume of sales this year is not as great as last? Building large sales on which there is no profit or worse, a loss on a considerable portion is not going to continue indefinitely to fool your stockholders and the buying public. At the start of what now seems likely to be a wonderful period of world business betterment should we not be frank with our own cost sheets and shape our course accordingly.

James H. Stedman

Rubber Roadway Prospects

As to the use of rubber in air-ship and outdoor road construction, I feel that my knowledge on the former is insufficient to pass an opinion, but of the latter I have made a study over a period of twenty years and perhaps might venture a few words.

The problem is not as to the length of time the rubber pavement will wear but the length of time it will stay down. Two different problems in adhesion present themselves, one over wood, which in a measure has already been partly solved, the other over concrete, which is far more difficult. With wooden under-construction, such as bridges, etc., we cannot only get adhesion with pitches and asphalts but can peg the blocks or sheets down with spikes, both of which are effective.

On the other hand where concrete is the under-construction the adhesion problem is the drawback which has not as yet been successfully overcome. The piece of roadway laid by the City of Boston Engineers on Harrison Avenue in front of the City Hospital began to come up almost as soon as it was laid. This material was in block form about 6″ x 9″ x 1½″ and laid on concrete base close joints but with no pitch or asphalt grouting—the water got under the blocks and up they came. When the adhesion problem is solved rubber should come into its own for outdoor work, at first in segregated areas such as hospital approaches, banking streets, etc., and later when it has proved itself in general city use.

JAMES H. STEDMAN
President, Stedman Products Co.
South Braintree, Mass.

Resistance of Pigmented Crepe to Sunlight

An investigation was reported in the *Bulletin of the Rubber Growers' Association*, 1924, pages 52 to 54, on the resistance of pigmented crepe rubber to atmospheric influences, particularly to sunlight. Samples of the crepe rubber which were prepared from preserved latex and pigmented respectively with one per cent of an orange lake on an alumina base, one and five per cent of carbon black and two and one half per cent of aluminum powder were exposed on a roof in the summer time. These samples were compared with each other as to their behavior in resisting the effect of sunlight and a sample of unpigmented rubber was exposed in the same manner. This sample was made from the same latex. A comparison was also made with ordinary imported crepe rubber.

Judged by the physical condition and the proportion rendered soluble in acetone, the samples containing carbon black were much more resistant to the effect of sunlight than the remainder, the sample with five per cent of carbon black being practically unaltered, even when the unpigmented samples began to flow. Plantation rubber was superior to crepe prepared from preserved latex.

Predicts Strong Rubber Market in 1925

Estimate Increase of 51,000 Tons in World Rubber Consumption —Increased Use of Reclaims Seen as a Result of High Prices

By **Fred B. Peterson**

THE crude rubber market of 1924, insofar as price movement is concerned, divides itself sharply into two phases corresponding to the first half and the last half of the year. The first half saw a fairly steady decline from a price of 27 cents on Jan. 1 to 17½ cents in the last week in May. From July 1 there has been a fairly steady advance to a high point of 39¾ cents, around which figure the market remains at this writing.

As it not infrequently happens, this price movement has corresponded closely to the degree of prosperity, actual or sentimental, existing in the tire business. During the first half of the year the tire manufacturers did a fairly large business, but during most of the time saw their production exceeding their shipments, with a consequent increase of inventory.

Profits Were Small

Profits were generally thought to be small or entirely lacking and agitations about further price reductions were disturbing. In the middle of the year the atmosphere seemed to change abruptly; shipments increased materially, thus reducing the inventories while maintaining about the same level of production. From this time on a tone of optimism permeated the tire trade which had heretofore been lacking.

By midsummer an advancing crude rubber market was obvious to all. There was scarcely a dealer in the New York or London market who did not maintain a long position. The manufacturers, however, continued their policy of recent times and bought only to cover their absolute and immediate necessities. This attitude, in the face of the statistics, is difficult to understand, but hoping against hope that a removal or modification of the British restrictions would take place was doubtless its principal cause.

It was not until this year that the full force and effect of the restriction scheme made itself apparent and it began to accomplish its purpose. In view of this, it is scarcely likely that the British are going immediately to abandon it. Their attitude is well set forth in the following extract from a report dated Oct. 23, 1924, emanating from one of the principal authorities in the London market:

"Naturally the change (the Stevenson restriction scheme did not please all buyers, and the opposition of a section of them has led to a certain delay in the success of the scheme), has now made its operation all the more certain as evidenced by higher prices.

"In addition to propaganda work at great expense, regarding which it is not necessary to enter into detail here, the chief anti-restriction weapon has been the hand-to-mouth buying policy adopted by American manufacturers. It is this policy which by decreasing reserve supplies to vanishing point now seems likely to bring about, temporarily at any rate, a greater tightness than the framers of the scheme intended.

Enemies of Scheme May Cause Scarcity

"Should a period of actual scarcity and consequent high prices occur, as it may do in the near future, it will not be the fault of the scheme, but solely of those who, in the hope of wrecking the scheme, have used every effort to depress prices artificially, and have thus brought the more drastic clauses of the scheme into operation."

Under the circumstances it is fair to assume that the restriction will continue indefinitely. In any event, its automatic flexibility will now be operative. For the present period (November-January) shipments from the restricted area are limited to 50 per cent of the standard production. If during the current period the average London spot price is over 15 pence and under 18 pence, an additional 5 per cent of the standard production will be permitted for the following period.

Should the average price for the present period exceed 18 pence, a 10 per cent increase for the next period will occur, and in each succeeding period the permissible amount will be increased by 10 per cent if the price averages over 18 pence, or by 5 per cent if it is between 15 and 18 pence.

It is to be noted, however, that, no matter how high the price goes, the increase cannot be over 10 per cent for any one quarter. Whether this will result in an acute shortage at any time is a matter of conjecture. The London stocks, which have heretofore acted as a price stabilizer, have during the last few months been depleted at the rate of approximately 1000 tons per week, and by the end of December are a little over 28,000 tons, the lowest since 1919.

Native Production Hampers Scheme

Another factor which has tended to hamper the effect of the restriction scheme has been the native production in the Dutch East Indies. Many have thought that the increase from this source was practically limitless, and that the higher the price the more would be forthcoming from this source. Such, however, has not been the case, and the quantity coming therefrom has apparently decreased during the last few months in spite of the increased price.

Another argument which has been advanced against there being any squeeze in crude rubber is that with the price of crude getting over 30 cents, a much

Ewing Galloway

Drying Rubber Near Singapore

Reprinted from the Financial and Business Survey of the *New York Evening Post.*

greater quantity of reclaimed rubber will be used. It may be that prices have not continued at present levels sufficiently long for this condition to arise up to the present, although the price has been over 30 cents since the end of September; according to the statistics of the Rubber Association of America, Inc., the consumption of reclaimed has remained practically stationary.

The Prospects for 1925

What, then, are the prospects at the beginning of the new year? Some basic figures are of interest. The world's consumption, based on ten months' actual figures, is estimated at 414,000 tons. The total importations into the United States for the year 1924 were, roughtly, 315,000 tons. The complete figures of the year's consumption, it is quite safe to assume, will reach 330,000 tons.

Stocks on hand and afloat to the United States at the end of November were computed to be 84,000 tons, and will probably be somewhat less than this by Jan. 1. This represents barely three months' supply. With predictions on all sides of a prosperous year for 1925, there is no reason for an assumption other than that our consumption will increase. Already there is a rumor around the market that the tire production next year will be some 58,000,000 against 49,000,000 for 1924.

This brings us to a contemplation of the amount of rubber which may be considered in sight for the next year. One of the best informed authorities in the New York market has made a careful estimate for the year beginning Nov. 1, 1924, to Oct. 31, 1925. He concludes that the world's consumption of crude rubber for that period will be 465,000 tons, of which this country will use 325,000 tons. He estimates the total stocks existing in all parts of the world on Nov. 1, 1924, both in producers', merchants' and consumers' hands, and in transit, at 192,500 tons.

617,625 *Tons Will be Available*

The amount exportable during the year from Malaya and Ceylon under the restriction scheme, provided the price be maintained at 18 pence or over, will be 217,625 tons. From all other sources, he estimates the supplies for the same period to be 207,500 tons, making a total supply of crude rubber for the period of 617,625 tons. While this is sufficient to take care of a consumption of 465,000 tons, it is to be observed that it would leave a world's visible supply on Nov. 1, 1925, of some 152,000 tons, or a decrease of 40,000 tons during the year. Should the London spot price average less than 18 pence for any of the periods, there would be a still further decrease.

If these figures are correct, and they have been checked and re-checked by many of the most careful students of the situation, there is little reason to expect any extended weakness to develop in the market next year. Of course, the thought in the back of the minds of all, and especially of the manufacturers, is that, while conditions are as indicated by these figures, the fact remains that there is a potential supply of rubber far in excess of present needs always at hand immediately the British restrictions are removed.

That is admitted by all, but the fact remains that it is and will doubtless long continue to be potential and not an actual supply. As before indicated, the Stevenson plan is just now accomplishing the purpose for which it was intended—that is, to get the price of crude rubber up to a point which would insure a continued existence in safety and reasonable prosperity to the rubber estates. A price around 18 pence permits this, and it may be fairly assumed that the efforts of the British will be continued in maintaining this level of price and, at the same time, going forward as steadily as possible to the full productive operation of their estates.

Ewing Galloway

Weighing Crude Rubber at a Jungle Weigh-House, Upper Amazon Valley

Bulletin Issued on Para Leaf Disease

The revival of interest in rubber cultivation in the American tropics following a long period of indifference has stimulated a review of past attempts and a study of the factors which may determine the success or failure of new enterprises. The discouraging outcome of the formerly very promising rubber plantation industry of the Guianas has been recognized for some time to have been largely due to the ravages of an endemic leaf disease which spreads from the scattered wild trees of the jungle to the closely-spaced plantings.

The extent to which this disease will be a factor in new contemplated enterprises has been questioned. The United States Department of Agriculture has made a study of the prevalence of the disease and its relation to the industry. Observations have been published in Department Bulletin 1286, just issued by the department. Of the numerous suggestions made in the past for controlling the leaf disease, none appears to have been practicable. The situation is not considered hopeless, however, because a sufficiently detailed knowledge of the disease as a necessary basis for control measures is lacking.

Attention is called to the promising possibilities existing in the deserted Guiana plantations for the selection of disease-resistant strains of the rubber tree. Until such strains are obtained or until further investigation has demonstrated a practical method of control of the leaf disease, renewed plantings in the infected regions, at least in the Guianas, is unlikely. Plantations may be established in other parts of the American tropics, however, in regions where the disease does not exist and other conditions may be equally suitable for the growth of the tree. In this case effective restrictions on the importation of propagating material to prevent the introduction of the disease should be adopted.

A copy of the bulletin may be secured free of charge, while, the supply lasts, by writing to the United States Department of Agriculture, Washington, D. C.

VULCANIZATION & ACCELERATORS

By Andre Dubosc

PART II (*CONTINUED*)

Natural and Mineral Accelerators

Continuing the Discussion of Tests Made with Samples of Raw Rubber from which Resinous Matters have been Extracted with Acetone—Resins in Crude Rubber Play an Important Part in Effecting Qualities of Products

WE have subjected the rubber latex to a very careful microscopical examination and we have never observed any difference between the globules coming from secondary tissue. On the other hand in the case of rubber latex which was derived from primary tissue, for example in the case of the Hevea latices, we have found that the proportion of globules that have a normal appearance is small, the proportion of resinous matters, although this is much higher than in the case of ordinary latex, is not nevertheless quite high enough to justify the small proportion of normal globules. The majority of the abnormal globules contain one third of their volume of ordinary globules and have an index of refraction which is lower than the others.

"For this reason a series of experiments was arranged on this interesting matter, and these were as follows: It is known that rubber will dissolve in ether. If there are present in the latex that is being examined, globules of resinous matters, which are separated from the rubber globules, then it is possible to isolate these by a preliminary treatment, for the resinous matters are more soluble in the ether than the rubber itself.

Proportions of Resinous Matter Vary

"Hence we have succeeded in separating the latex into three solid fractions, which on extraction with acetone in a Soxhlet apparatus, gave 2.56 per cent, 2.44 per cent and 2.16 per cent of resinous matter. We expected to find a greater difference between the resinous matters that were contained in the three extracted and the resins which were extracted directly from the rubber globules. The results of these experiments were interesting but they were not conclusive. The proportions in which the resinous matters and the pure rubber are present in the crude rubber gum vary. In fact this variation is between rather wide limits. This is particularly true in the case of such rubbers as djeulatong, which is derived from the latex of the Dyera tree. The solid particles derived from this latex, in this particular case, do not contain more than ten per cent of rubber latex. The remainder of the solid matter is composed of resinous materials that are not saponifiable.

It has been mentioned above that the latex sample that was being investigated was separated into three separate fractions of solid products. The weights of these fractions were 11 grams, 11.5 grams and 6.8 grams.

Testing Latices of Good Quality

Latices which gave rubbers of good quality, such as tye latex of the Ficus elastica tree and that of the castilloa tree, were found to yield a solid rubber product which contained five per cent of resinous materials in the first case, and from ten to fifteen per cent of resinous matter in the second case. Of course these figures will vary in accordance with the age of the rubber tree from which the latex was taken.

On the other hand the latex of Hevea, when it is properly prepared, does not contain any more than from one to three and a half per cent of resinous matter. Under certain conditions it was found smoked sheets of Hevea rubber contained greater percentages of resinous ingredients. This is probably due to the fact that the rubber absorbed certain constituents of the smoke, which are soluble in acetone and hence increase the proportion of resinous matter in the rubber. The percentage of resinous matter in smoked sheet varies around two and a half per cent.

The extraction of rubber with the aid of acetone does not remove from it all the substances soluble in water, and if an extraction of the rubber is directly made with water, the proportion of solids obtained under these conditions is higher than that obtained by extracting rubber that remains behind after the acetone extraction with water. In the same manner, if the rubber sample is first subjected to extraction with water, then when the acetone extraction is carried out, an entirely different extract is obtained. When extracting samples of pale crepe rubber with water, an extract is obtained which ordinarily averages around four to five per cent. It is found that the extraction of pale sheet rubber with water will yield somewhat larger percentages. On the other hand the extract obtained from smoked rubber sheet varies between one and one and a half per cent. The following tabulation shows the different percentages of extracts obtained in this manner.

	1	2	3	4
Kind of rubber	Percentage soluble in water	Percentage soluble in acetone	Percentage of acetone extraction soluble in water	Percentage of residue from acetone extraction soluble in water
1. Pale Crepe	0.44	3.18	0.60	0.90
2. Smoked sheet	1.40	3.84	0.56	0.90
3. Smoked sheet	1.24	3.64	0.82	0.44
4. Average pale sheet	0.68	3.92	1.50	0.44

These figures refer to a rubber which was originally dry. The figures which are shown in column 3 indicate the fraction of the acetone extracted matter, as indicated in column 2, which is soluble in water.

Discussion of the Figures

If sample number one is studied, it is curious to note that the total percentage of the substances that are soluble in water, as shown in the third column and that which is shown in the fourth column add up to give a figure of one and one half per cent, while the percentage of matter that is soluble in water, determined by a direct water extraction of the rubber, amounts to only 0.44 per cent. On the other hand sample number 3 gives figures which are entirely concordant. Thus the percentage of rubber direct soluble in water is 1.24 per cent and the sum of the figures given in columns 3 and 4 for sample number 4 is 1.26 (0.82 plus 0.44).

The products that were extracted with the aid of acetone and then freed from their content of resinous materials are substances which are of considerable interest from the physical examination.

A pale crepe from Hevea latex, which was extracted with acetone, was then mixed with sulphur in the ordinary manner. It was vulcanized with another sample of rubber from which the resinous matters had not been removed by acetone extraction. The second sample of rubber was taken from the same sheet as the first. It was found that there was quite a difference between the vulcanized products obtained in this fashion. The sample that had been subjected to extraction with acetone was soft and without elasticity. It appeared to be under-vulcanized. When this rubber was subjected to heating at a higher temperature for a prolonged period of time, it was found that its properties were not improved in any way.

It is therefore evident that when the sample is subjected to an extraction with acetone, carried out in the cold, the properties of the vulcanized product obtained from this extracted rubber are quite different from those of a normal vulcanized rubber.

Acetate Extraction in the Cold

Accordingly an acetone extraction in the cold was performed on two samples of rubber, one regular Para rubber and the other Rambong rubber (ficus elastica). The rubber samples were cut from sheets, and in this form they were dipped into a bath of acetone which was contained in corked bottles. These bottles were then placed in a closet and allowed to remain there for an indefinite period. From time to time the acetone was removed, distilled and then replaced in the bottles. This experiment was continued over a period of three months and a half. At the end of this time it was considered that all the resinous ingredients of the rubber gum had been removed. The samples of the crepe rubber which did not appear to have been changed in any way by this treatment were then dried in dry air. The percentages of the extracts with acetone were 3.05 in the case of the Para crepe rubber and 7.04 in the case of the Rambong crepe rubber.

Before these gums were mixed or vulcanized after this treatment, they were allowed to remain for a period of months to permit them to regain their strength. This was done in case the treatment might have had some physical effect on them. The treated rubber samples and the samples that were not subjected to an acetone extraction and in which the resinous matters were still contained were then mixed with five per cent of sulphur. Then all the samples were vulcanized at temperatures of 135, 139 and 148.5 degrees C. The following tabulations give the results obtained when these samples were examined to determine their physical properties.

Results of tests made on sample of Hevea rubber one week old. The vulcanization lasted three hours at a temperature of 139 degrees C

	Resistance to breaking per square millimeter	Elongation length equals unity	Present condition
Non treated	1975	10.5	destroyed
Extracted	1553	8.5	destroyed

Vulcanization at 135 degrees C for three hours

Non treated	999	10.8	good
Extracted	515	7.1	partially destroyed

Rambong rubber vulcanized for three hours at a temperature of 148.5 degrees C

	Resistance to breaking per square millimeter	Elongation length equals unity	Condition
Non treated	1,163	13.7	destroyed
Extracted	1,115	8.7	destroyed

Rambong rubber vulcanized for three hours at 139 degrees C

Non treated	775	12.7	good
Extracted	871	11.1	destroyed

As far as the samples of Hevea rubber are concerned, it appears that the more carefully the acetone extraction is carried out, the lower will be the quality of the extracted and vulcanized rubber. The samples are weaker and not as elastic after vulcanization. The astonishing result is the ease with which the sample which contained resinous matter decomposed.

The vulcanization of the samples at a temperature of 139 degrees C was a little too strenuous. The two samples appeared to have been over-vulcanized and would not keep. When vulcanization was carried out a temperature of 135 degrees C, the results indicated that such treatment was not far from giving excellent vulcanization. The sample of non-treated rubber which was subjected to vulcanization and then kept for a period of three years showed no signs of deterioration after this period. The mechanical strength of the sample of extracted and vulcanized rubber was very small, but it was not completely destroyed.

The same effects were to be noted with samples of Rambong rubber, although manifested in a much lesser degree.

The outstanding characteristics of samples which had been subjected to extraction with acetone and then vulcanized was that they were soft and did not possess nerve. This is directly contrary to those samples which had not been extracted with acetone. On the other hand the crude rubber did not appear to be altered in any way by the extraction.

An attempt was made to determine whether or not the results described above were occasioned by the nature of the solvent. To this end a series of experiments were made in which the solvent acetone was replaced by 90 per cent alcohol. The tests were carried out on samples of Hevea crepe rubber. The treatment in this case lasted over a period of four months. It was found therefrom that 1.94 per cent of the resinous matter was extracted which means that two thirds of the quantity of resins that are present can be extracted by means of hot acetone.

The vulcanized samples of rubber were then tested after a period of twenty months had elapsed. Those that were made from the rubber gum which had not been subjected to extraction were found to be in very good condition. Those samples of vulcanized rubber which were prepared from crude rubber gum from which the resinous matter had been extracted were found to be soft and weak after being kept for that period of time. In fact the samples of vulcanized rubber may be considered as having been destroyed by storage.

Physical Testing of Samples

The following results were obtained when the two qualities of vulcanized rubber were tested physically.

	Resistance to rupture in grams per square millimeter	Elongation at rupture in percentage	Permament elongation in percentage	Percentage of elongation under constant weight of 60 grams
Non treated	1593	6.3	3.8	44.2
Extracted	419	5.8	12.6	76.2

The deterioration that is brought about by the removal of the resinous matters from the crude gum by extraction with acetone is either total or for the most part very apparent. The degree of the deterioration is the same no matter what the nature of the solvent is that is employed in the extraction, whether the solvent is alcohol or acetone, and furthermore whether the solvent is used in the hot or the cold condition."

The part that is played by the resinous matter contained in the original raw rubber on the properties of the vulcanized product has been determined in an even clearer manner than has been described above. There is no doubt but that they appear to be an essential part of the vulcanization process. The point is what is the manner of their action on the sulphur or what is their relation to the sulphur that is added for vulcanizing purposes? This is what Stevens and Clayton-Beadle neglected to determine in their investigations on this subject. Nevertheless it is a matter of the highest importance. The author conducted a series of experiments on this matter and the results which he obtained are given herewith.

The resinous matter extracted from a crude rubber, either Hevea or Djelutong, (acetone being used in the extraction), is mixed in a mortar with eighty per cent of sulphur, which corresponds to the proportions that exist between the resinous matter in the crude rubber and the sulphur added for vulcanizing purposes. When this mixture of resinous matter and sulphur is placed in a round-bottomed flask provided with an outlet for removal of the products obtained in the test and if the temperature of the contents of this flask are raised to 130 degrees C, the temperature of vulcanization, a considerable volume of sulphuretted hydrogen gas will be evolved.

It is possible to weigh the amount of sulphuretted hydrogen formed in this manner by making the gas pass through a wash bottle which contains a solution of acetate of lead.

It is therefore very clear that the action of the resinous matters in the crude rubber on the sulphur that is added for vulcanization is such that it gives rise to the formation of sulphuretted hydrogen gas.

The results of tests with rubber from which resinous matter has been extracted will be continued in our next issue.—The Editor.

Guayule as a Rubber Softener

A Mix Containing Guayule Will Cure Properly When Small Amounts of Certain Organic Acids are Added

GUAYULE has always been a good softener for rubber, and used in large quantities by a few companies. Many, however, still believe that while it may be a good softener, it will not cure properly. As a matter of fact, this is not true. Guayule will cure alone with litharge, providing a small amount of the proper organic acids is added to make up for their natural deficiency in the crude material.

For example, the following four compounds containing high Guayule all show very satisfactory tensiles at a short time of cure.

Cured at 40 pounds steam pressure in a mold

	A-1	A-2	A-3	A-4
Guayule	100	100	65	30
Smoked Sheets	–	–	35	70
Litharge	10	10	10	10
Sulphur	6	6	6	6
Super-sulphur No. 2	–	3	–	–
Parra M. R.	3	3	2	1

	15 Minutes		30 Minutes		45 Minutes	
	T.S.	Elong. %	T.S.	Elong. %	T.S.	Elong. %
A-1	1990	860	2300	855	2370	850
A-2	2450	835	2720	820	2800	810
A-3	2730	870	2980	830	2920	815
A-4	3230	855	3100	825	2760	780

In the above, it is the Parra M. R. (a soft-wood pitch) which provides the necessary organic acids.

Five or Ten Per Cent is Great Help

Ordinarily, less Guayule than above will be required as a softener. Five or ten per cent on the rubber is a great help in the smooth running of stocks on calenders and in tubing machines, especially with fast accelerators. The following six pure gum compounds show the addition of small amounts of Guayule:

	B-1	B-2	B-3	B-4	B-5	B-6
Pale Crepe	100	95	90	100	95	90
Guayule	–	5	10	–	5	10
Zinc Oxide	5	5	5	5	5	5
Litharge	–	–	–	10	10	10
"Tuads"	3/16	3/16	3/16	–	–	–
"Super-sulphur No. 2"	–	–	–	3	3	3
Parra M. R.	–	–	–	3	3	3
Sulphur	4	4	4	4	4	4

Cured at 20 pounds steam pressure

	15 Minutes		30 Minutes		60 Minutes	
	T.S.	Elong. %	T.S.	Elong. %	T.S.	Elong. %
B-1	3750	770	4870	785	4230	755
B-2	4300	825	4830	760	4020	760
B-3	4310	780	4980	810	4300	765

Cured at 40 pounds steam pressure

	15 Minutes		30 Minutes	
	T.S.	Elong. %	T.S.	Elong. %
B-1	4120	775	4000	785
B-2	3910	800	3920	810
B-3	4280	810	3930	765

Cured at 30 pounds steam pressure

	15 Minutes		30 Minutes		60 Minutes	
	T.S.	Elong. %	T.S.	Elong. %	T.S.	Elong. %
B-4	3020	835	3910	770	4150	725
B-5	2820	845	3850	790	4430	765
B-6	2890	830	3790	770	4400	760

Cured at 40 pounds steam pressure

	15 Minutes		30 Minutes	
	T.S.	Elong. %	T.S.	Elong. %
B-4	3300	805	3720	730
B-5	3380	785	4220	750
B-6	3780	830	4100	755

Thus the Guayule maintains the quality of the stocks. Similarly in compounded stocks such as tire treads the following show the addition of small amounts of Guayule:

	C-1	C-2	C-3	C-4	C-5	C-6
Pale Crepe	100	95	90	100	95	90
Guayule	–	5	10	–	5	10
Zinc Oxide	5	5	5	5	5	5
Litharge	–	–	–	10	10	10
Carbon Black	15	15	15	15	15	15
Thermatomic Carbon	15	15	15	15	15	15
Dixie Clay	15	15	15	15	15	15
"Tuads"	3/16	3/16	3/16	–	–	–
D.P.G.	1/4	1/4	1/4	–	–	–
"Super-sulphur No. 2"	–	–	–	3	3	3
Parra M.R.	–	–	–	3	3	3
Sulphur	4	4	4	4	4	4

Cured at 20 pounds steam pressure

	15 Minutes		30 Minutes		60 Minutes	
	T.S.	Elong. %	T.S.	Elong. %	T.S.	Elong. %
C-1	3840	645	3600	620	3630	605
C-2	3610	640	4100	630	3680	610
C-3	3750	675	3670	660	3540	655

Cured at 40 pounds steam pressure

	15 Minutes		30 Minutes	
	T.S.	Elong. %	T.S.	Elong. %
C-1	3470	600	3380	600
C-2	3730	630	3500	615
C-3	3460	650	3280	630

Cured at 30 pounds steam pressure

	15 Minutes		30 Minutes		60 Minutes	
	T.S.	Elong. %	T.S.	Elong. %	T.S.	Elong. %
C-4	3070	675	3910	640	3550	570
C-5	3080	675	3700	590	3800	585
C-6	3050	685	3710	640	3360	575

Cured at 40 pounds steam pressure

	15 Minutes		30 Minutes	
	T.S.	Elong. %	T.S.	Elong. %
C-4	3820	635	3640	605
C-5	3760	640	3740	605
C-6	3740	640	3560	600

Some softener is needed in frictions and tubed stocks that is economical, that will help mechanical handling without scorching, that will not make a friction stick to the liners, and above all that will not lower quality. Guayule meets this need.

CLASSIFIED ADVERTISING

10 Cents a word, minimum charge $2.00, payable in advance. Address replies to box numbers, care THE RUBBER AGE, 225 Fourth Ave., New York.

WANTED: Experienced man who is capable of running a sheet rubber and spreading department. Must have had experience in either or both departments. Address E. I. Dupont de Nemours & Co., Inc., Fairfield, Conn.

LABORATORY—Rubber, fully equipped for experimental work, to rent by hour, day or month, with or without services. Industrial Rubber Corporation, 131 Harris Ave., Long Island City, N. Y.

WANTED: Complete set of heel molds for ladies, junior and mens, or will take run of any one style. Must be standard sizes and nailing. Send samples. Wedge Heel & Rubber Co., Fort Wayne, Indiana.

WANTED: Following second hand machinery: 1—6 x 12 Rubber experimental mill; 1—12 x 12 Knock or hand steam vulcanizing press; 1—Scott rubber testing machine. Box 402, THE RUBBER AGE.

SALESMAN WANTED—Services of experienced rubber accelerator salesman to cover Akron and Western Territory wanted by large manufacturer. THE RUBBER AGE, Box 403.

MARKETS

Cottons and Fabrics

NEW YORK, Jan. 15, 1925

The declining tendency of the market two weeks ago was due to a general reconsideration of the statistical position. This was prompted by bearish estimates relative to the season's available supplies and consumption. The estimate issued by the Department of Agriculture placed the world crop at approximately 23,600,000 bales of 478 pounds net, excluding linters, as against 19,300,000 bales last year and 23,580,000 bales, the average of the five-year period preceding the war. This estimate is more than 4,000,000 bales in excess of last season's consumption.

The inference is that, unless a severe break in prices occurs in the near future, causing a considerable increase in the demand, current supplies will, in addition to meeting the requirements, provide a substantial carry-over. Consumption estimates published by the International Federation of Master Cotton Spinners were 11,900,000 bales and being considerably below expectations served to increase the bearish significance of the supply figures.

Week of Jan. 10 Was Dull

The week ended Jan. 10 was a comparatively dull one in the market. Following the declines during the previous week, there was a fair rally due to buying based on the strength of stocks and the advance in wheat. This buying culminated when March deliveries traded as high as 24.12 cents a pound, but later on the same day declined to 23.43, due to liquidation by disappointed longs. During the remainder of the week the market was quiet, with prices fluctuating within a narrow margin, supported in measure by moderate trade buying on dips and by liberal exports as well as fears for the next crop, due to insufficient winter rains in the western half of the belt. There has been talk of a reduction in cotton acreage owing to the temptation to divert more or less cotton land to grain crops because of high prices prevailing for grain and because of the diminished incentive to grow cotton at the lower range of prices which have prevailed this season.

Exports of cotton for the week ended Jan. 9 amounted to 179,597 bales, compared with 361,185 bales the previous week and 102,744 bales for the corresponding week in 1924, the Department of Agriculture reported. The large port stocks, amounting to 600,000 bales more than a year ago in round figures, point to the continuance of large exports which are likely to be further stimulated by the advance in sterling exchange and the possibility that sterling may reach parity in the near future.

When compared with the limited volume of business the preceding week, trading developed considerable activity on the 12th at an advance of 17 to 23 points. A rise in May wheat in Chicago and a further advance in securities stimulated cotton. But the next day hedge selling and liquidation threw cotton back and it closed slightly lower after a moderate early advance. Cotton was still under the shadow of grain and stocks.

A further setback occurred on the 14th, leaving a loss of 14 to 18 points at the close of the session. Selling orders predominated the day. A reaction of over 3 cents in sterling to $4.76, together with a profit-taking movement in securities, brought reselling of long cotton from numerous quarters. Covering of January contracts continued to influence the discounts of that month, and January sold only 23 points under March, as compared with 43 points when notices were first issued three weeks ago. March gained slighty on the May position and the two months sold 28 points apart.

Trading today on the local exchange continued of a sluggish character. With the exception of the usual switching and arbitrage operations, it was purely confined to local sales. The fact that grain and the stock market continued to offer a better opportunity for realizing quick profits kept speculative interests out of the market. Reactionary Liverpool cables carried values some 5 to 10 points under previous closing levels because they induced scatter buying.

New York Cotton Prices

	Open	High	Low	Last Sale	Close Jan. 2
January	23.55	23.71	23.55	23.62	23.67
March	23.80	23.93	23.76	23.82	23.99
May	24.07	24.23	24.07	24.14	24.30
July	24.35	24.44	24.28	24.33	24.44
October	23.81	23.94	23.80	23.85	23.75

(Continued on Page 268)

TO FIGHT BOLL WEEVIL WITH AIRPLANE SPRAYS

The eradication of the cotton boll weevil by means of sprays from airplanes flying over the fields may soon become a commercial project developed on a large scale, if plans reported to the War Department are successful. The plan of spraying death-dealing liquid or chemicals over weevil-infested areas by airplane was developed some time ago, but has never been undertaken on an extensive scale, either privately or by the Government.

Under this plan private companies are being organized to contract to rid cotton fields of the weevil. A stipulated price of one company, it is understood, is $7 an acre.

J. H. LANE & CO.

Tire Fabrics Cord Fabrics

Enameling Duck Drill Sheeting

Osnaburg and Special Constructions

250 W. 57 STREET, NEW YORK 226 WEST ADAMS ST., CHICAGO

Cotton Markets

(Continued from Page 267)

TIRE FABRICS

Fabric mills consider themselves in a good position in regard to future operations. Although the sold-up condition is limited to the first quarter of the year, there is a little leeway for new business. Inquiry in the market was good and several sales were reported to have been placed. In one case a total of 500,000 pounds figured in a single sale. The demand was for January-March delivery which all mills could not book.

The principal demand was for standard carded peel American grades. Some of the mills prefer to withdraw from the market for a short time until they can check up on orders already booked.

With Akron rubber factories preparing for a year of great activity, cotton fabric brokers expect an increasing demand for all grades. Requirements of the tire companies, most of which are centered in the New York market, for fabric and during 1925 are estimated at nearly 25 per cent more than in the preceding year.

Buying in Larger Lots

Fabric brokers are of the opinion that tire manufactures are showing more of a tendency to break away from the hand-to-mouth buying policy to which they have strictly adhered in the past. Many rubber executives hold the view that it is a wise policy to make liberal purchases from the fabric mills at prevailing prices in order to take care of requirements for some time to come. It is not generally believed that the cotton market will go lower, and many observers are of the opinion that the price of cotton will advance considerably in 1925.

It is pointed out that more cotton will be required by the rubber industry this year because of the change in construction of balloon tires, most of which will be built with six plies instead of four, and because of the plans made by one large rubber company to build many airships in 1925.

CORD FABRICS

Combed Sakellarides		Nominal		
Combed Peeler	lb.	Nominal		
Carded Peeler		.52	@	.55
Combed Egyptian uppers	lb.	.70	@	.74
Carded Egyptian uppers	lb.	.64	@	.66

SQUARE WOVEN

17¼-ounce Egyptian uppers, combed	lb.	Nominal		
17¼-ounce Egyptian uppers, carded	lb.	.62	@	.64
17¼-ounce Sakellarides, combed	lb.	Nominal		
17¼-ounce Peeler, carded	lb.	.50	@	.53

Ducks—There was fair inquiry for single filling duck in several quarters of the market. There was little business done in double filling. The contracted deliveries have been going forward and satisfied consuming demands. A demand for considerable quantities of numbered ducks was reported The bulk of these goods that sold were on spot. A better movement of heavy goods is momentarily expected. The mills are in a favorable position and can apparently outwait dilatory buyers. Some looms are ready to start on new business.

Burlaps—A few sales of burlaps were reported during the last two weeks but activity in the market has been limited. Much of the inquiry was in the nature of keeping in touch with changing prices. A sharp break in the shipment price of burlaps on the 13th affected the spot and afloat price basis to a lesser degree. There were resellers in the market who were willing to sell under replacement values. The market was in the position of preferring to shape its attitude in regard to trading tendencies and little buying resulted.

SHEETINGS

40-inch 2.50-yard	yd.	.16¼	@	—
40-inch 2.85-yard	yd.	.14¼	@	—
40-inch 3.15-yard	yd.	.14¼	@	—
40-inch 3.60-yard	yd.	.12	@	—
40 inch 3.75-yard	yd.	.11¾	@	—
40-inch 4.25-yard	yd.	.10	@	—

DUCKS

Belting	lb.	.45	@	.47
Hose	lb.	.45	@	.47
Enameling	lb.	.46	@	.51
Shoe Ducks	lb.	.38	@	—
Single filling	lb.	.19½	@	.23
Double filling	lb.	.22½	@	.24½

BURLAPS
(Carload Lots)

7½-ounce 40-inch		7.85	@	7.90
8 -ounce 40-inch		7.90	@	8.00
10 -ounce 40-inch		9.30	@	9.35
10½-ounce 40-inch		9.60	@	9.65

Do You Read

THE MARKET PLACE

Reclaimed Rubber

NEW YORK, Jan. 15, 1925

With production increasing in many rubber factories, the market is firm. Although it is not quite as active as it was some months ago, reclaimers report a steady turnover of all grades. Prices are holding at quoted levels and there is little tendency to offer concessions, despite the weakness of crude rubber. Reclaimers continue to produce at capacity on certain grades, and with the bulk of this production being shipped under contract, there is no large surplus in the market. Prices are quoted as follows:

Friction (Uncured)				
No. 1	lb.	.29½	@	.31
No. 2	lb.	.20	@	.21
High Tensile Black				
Super-Reclaim No. 1	lb.	.17	@	.17¼
" " No. 2	lb.	.12½	@	.12¾
Shoe				
Unwashed	lb.	.09	@	.09¼
Washed	lb.	.12¼	@	.12½
Tube				
No. 1 (Floating)	lb.	.15¾	@	.16
No. 2 (Compounded)	lb.	.10¾	@	.11
Tires				
Black, unwashed	lb.	.08¾	@	.09
Black, washed	lb.	.10	@	.10¼
Dark Gray	lb.	.09½	@	.09¾
Light Gray	lb.	.11	@	.11¼
White	lb.	.14½	@	.14¾
Truck	lb.	.08½	@	.08¾
Miscellaneous				
Mechanical Blends	lb.	.05	@	.06
Red, High Grade	lb.	.13¾	@	.14

Scrap Rubber

NEW YORK, Jan. 15, 1925

Activity in the scrap rubber market at the present time is very slight. In another month an increase is looked for. This is due to the fact that around the first of the year most mills bought rather heavily and most of them have large stocks on hand at this time. Standard white auto declined from 27.50 to 21.00 a ton. Mechanicals have moved at slight concessions.

Auto tire peelings		.01	@	.01⅛
Standard White auto	ton	21.00	@	—
Mixed auto	ton	17.00	@	—
Bicycle tires	tons	10.00	@	—
Clean solid truck tires		35.00	@	—
Boots and shoes		.02	@	.02⅛
Arctics, untrimmed		.01⅛	@	—
Arctics, trimmed		.01½	@	—
Inner tubes, No. 1		.05¼	@	—
Inner tubes, compounded		.03½	@	—
Inner tubes, red		.03¼	@	—
Battery jars, clean hard rubber		.01½	@	—
Air Brake Hose	ton	14.00	@	—
Rubber Hose	ton	11.00	@	12.00

TIRE FABRICS

OF EVERY DESCRIPTION

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SEA ISLANDS EGYPTIANS PEELERS

FABRICS TO SPECIFICATION

AMERICAN COTTON FABRIC CORPORATION

CHEMICALS & COMPOUNDING INGREDIENTS

Accelerators — Colors — M.R. — Compounding Ingredients
Softeners — Vulcanizing Ingredients — Rubber Substitutes

NEW YORK, January 15, 1925—Reports from leading factors indicate that conditions in the rubber industry at this time are exceptionally good. The excellent demand continues and the price level for the majority of products remains the same. The market for industrial chemicals was stronger and products which previously showed an element of weakness. were more stable. Manufacturers of acetic acid reported an increased demand and the market in organic accelerators showed neither increase or decrease from the steady tone previously observed.

ACCELERATORS

Organic

Aldehyde ammonia, crystals	lb.	$ .90 @	.95
Aniline oil, drums	lb.	.17 @	.17½
Diphenylguanidine	lb.	1.10 @	1.15
Excelsior	lb.	.35 @	.40
Formaldehyde-Aniline	lb.	.42½ @	—
Hexamethylene-tetramine	lb.	.85 @	—
Paraphenylenediamine	lb.	1.40 @	1.50
Super-Sulphur No. 1	lb.	.50 @	—
Super-Sulphur No. 2	lb.	.18 @	.30
Tetramethyl—			
Thiuramdisulphide	lb.	4.50 @	6.00
Thiocarbanilide, kegs	lb.	.26 @	.30

Inorganic

Lead, sublimed blue	lb.	.10 @	—
Lead, white	lb.	.11 @	—
Litharge, domestic	lb.	.12¾ @	—
Lime, superfine	lb.	.01½ @	.02
Magnesia, calcined,			
light,	lb.	.24 @	.25
extra light	lb.	.45 @	.60
heavy	lb.	.04 @	.05

COLORS

Blacks

Arrow "Aerfloted"	lb.	.06¼ @	.10
Bone Black	lb.	.08 @	.11
Carbon "	lb.	.06 @	.11
Drop "	lb.	.07½ @	.10
Ivory "	lb.	.15 @	.45
Lamp "	lb.	.12 @	.40
Micronex	lb.	.07 @	.12
Thermatomic carbon	lb.	.04 @	.08

Blues

Cobalt	lb.	.21 @	.26
Prussian	lb.	.36 @	.38
Ultramarine	lb.	.08 @	.35

Browns

Iron oxide	lb.	.02¼ @	.06¼
Sienna, Italian,	lb.	.04½ @	.14
Umber, Turkey	lb.	.04 @	.06
Vandyke, domestic	lb.	.03½ @	.04

Greens

Chrome, light	lb.	.29 @	.31
medium	lb.	.31 @	.32
dark	lb.	.33 @	.35
Commercial	lb.	.10 @	.10½

Reds

Antimony			
crimson, 15/17 F.S.	lb.	.35 @	.39
sulphur free	lb.	.45 @	.60
golden, 15/17 F.S.	lb.	.16 @	.19
calcium and sulphur free	lb.	.40 @	—
red sulph.15-17 F.S.	lb.	.16 @	.20
Indian, English	lb.	.11 @	.13
Para toner	lb.	.90 @	1.00
commercial	lb.	.14 @	.15
Red oxide, reduced	lb.	.04 @	.12
pure	lb.	.12 @	.14
Toluidine toner	lb.	1.80 @	2.10
Venetian red	lb.	.01½ @	.05
Vermillion, quicksilver,			
English	lb.	1.40 @	1.50
domestic	lb.	.15 @	.25

Whites

Albalith	lb.	.06⅜ @	.06⅝
Aluminum bronze		.55 @	1.25
Lithopone Azolith	lb.	.06⅛ @	—
Zinc Oxide—American Process			
XX red	lb.	.07¾ @	.08¼
Kadox,			
black label, bags, cars		.11⅝ @	.11⅞
blue " " "		.10⅝ @	.10⅞
red " " "		.09⅝ @	.09⅞
American Azo:			
ZZZ (lead free)	lb.	.07¾ @	.08¼
ZZ (under 5 per cent leaded)	lb.	.07 @	.07½
Z (8-10 per cent leaded)	lb.	.06¾ @	.07¼
Zinc Oxide—French Process			
White seal	lb.	.12 @	—
Green seal	lb.	.10¾ @	—
Red seal	lb.	.09¾ @	—

Yellows

Chrome, light		.20 @	.22
dark and medium	lb.	.20 @	.22
Cadmium Sulphide	lb.	2.00 @	2.50
Ocher, French medium	lb.	03 @	.03½
domestic	lb.	.01½ @	.02½

COMPOUNDING INGREDIENTS

Aluminum Flake	ton	21.85 @	24.50
hydrate light	lb.	.17 @	.18
Ammonia carbonate	lb.	.13½ @	.14½
Asbestine	ton	15.00 @	18.00
Barium carbonate	ton	63.00 @	65.00
Barium Dust	lb.	.05 @	.06
Barytes southern off-color,	ton	15.00 @	18.00
Western prime white	ton	22.00 @	23.00
imported	ton	28.00 @	38.00
Basofor	lb.	.04½ @	—
Blanc fixe, dry f.o.b. works	lb.	.03¾ @	.04½
Carrara filler	lb.	.01¾ @	—
Chalk, precipitated,			
extra light	lb.	.04¼ @	.05
heavy	lb.	.03¼ @	.04
Clay, China, domestic,	ton	15.00 @	25.00
Dixie	ton	20.00 @	35.00
Blue Ridge	ton	12.00 @	25.00
Langford	ton	12.00 @	26.00
Fossil flour	lb.	.03 @	.05
Glues, extra white	lb.	.21 @	.29
medium white	lb.	.19 @	.25
cabinet	lb.	.16 @	.25
cabinet low grade	lb.	.14 @	.18
common bone	lb.	.10 @	.13
Graphite flake, bbls.	lb.	.06½ @	.12
Lump	lb.	.04 @	.07
Infusorial earth, powdered	ton	60.00 @	—
bolted	ton	65.00 @	—
Liquid latex	gal.	1.25 @	1.35
Magnesia, carbonate	lb.	.07⅛ @	.07¼
Mica, powdered	lb.	.07 @	.15
Rotten Stone (powdered)	lb.	.02½ @	.04½
Soapstone, powdered	ton	15.00 @	22.00
Starch, powdered	cwt.	4.12 @	4.39
Talc, domestic	ton	13.00 @	22.00
French	ton	18.00 @	22.00
French, high grade	ton	38.00 @	45.00
Italian	ton	45.00 @	55.00
Terra Alba	cwt.	1.25 @	2.00
Tripoli, white	lb.	.02 @	.02¼
Whiting, commercial	cwt.	1.00 @	1.15
gilder's bolted	cwt.	1.25 @	1.35
English cliffstone	cwt.	1.50 @	—
Paris whiteAmerican	cwt.	1.25 @	1.50
Quaker	ton	13.00 @	15.00
Sussex	ton	8.00 @	16.00
Wood pulp XXX	ton	35.00 @	—
" " X	ton	25.00 @	—

MINERAL RUBBER

Genasco (factory)	ton	50.00 @	52.00
Granulated M.R.	ton	35.00 @	45.00
Hard hydrocarbon	ton	29.00 @	35.00
320/340 M. P hydrocarbon (c. l. factory)	ton	47.00 @	52.00
300/310 M. P. hydrocarbon (c.l. factory)	ton	42.00 @	47.00
Synpro, granulated, M. R. (factory)	ton	55.00 @	70.00

SOFTENERS

Acids

Acetic, 28%	cwt.	3.12 @	3.37
Cresylic, 97%	gal.	.62 @	.65
95%		.58 @	.61
Muriatic, 20%	cwt.	.90 @	1.00
Nitric, 36 degrees	cwt.	4.25 @	4.50
Sulphuric, 60 degrees	ton	9.50 @	10.50
66 degrees	ton	14.00 @	15.00
Tartaric, crystals	lb.	.29 @	—

Alkalies

Caustic soda, 76%	cwt.	3.20 @	—
Soda ash, 58% C.L.	cwt.	1.43 @	1.45½

Oils

Castor, No. 3, bbls.	lb.	.16¾ @	—
Chinawood, bbls.	lb.	.15½ @	.15¾
Corn, crude, bbls.	lb.	.13 @	—
refined	lb.	.14 @	—
Cottonseed, crude		.09⅝ @	.14½
Glycerine C.P. Drums	lb.	.19 @	.19½
Linseed, Raw C.L.	gal.	1.07 @	—
Palm, Niger	lb.	.09 @	—
Lagos	lb.	.09¾ @	—
Peanut,domestic,crude	lb.	.13 @	—
Petrolatum, white		.12¾ @	.13
amber		.03⅞ @	.04¼
dark amber	lb.	.03⅞ @	.03¾
Pine, steam distilled	lb.	.65 @	.70
Rapeseed, refined	gal.	1.00 @	1.02
blown	gal.	1.10 @	—
Rosin, first rectified	gal.	.45 @	.46
second rectified	gal.	.47 @	.48
Soya Bean, crude		.13 @	.13½
Tar, commercial	gal.	.30 @	.32

Resins and Pitches

Parra M.R.	lb.	.06 @	.07
Tar Retort	bbl.	12.00 @	—
kiln burned	bbl.	12.00 @	—
Pitch, Burgundy	lb.	.65 @	.66
coal tar	gal.	.05½ @	.06
pine	bbl.	5.50 @	6.00
Rosin, grade K	bbl.	8.30 @	—
Shellac,			
Superfine orange	lb.	.66 @	.67

Solvents

Acetone, drums C.L.	lb.	.17 @	—
Alcohol, denatured,			
No. 1 bbls.	gal.	.61 @	.65
Benzol, 90%	gal.	.23 @	—
pure		.25 @	—
Carbon bisulphide	lb.	.06 @	.07
tetrachloride	lb.	.07 @	.07¼
Dimethylaniline	lb.	.33 @	.36
Motor gasoline,			
steel bbls.	gal.	.17 @	—
Naptha, V. M. & P.	gal.	.14¾ @	—
Toluene	gal.	.31 @	—
Turpentine, spirits	gal.	.92 @	.93
wood	gal.	.78 @	.80

Waxes

Bayberry	lb.	.21 @	.22
Beeswax	lb.	.50 @	.55
Carnauba, No. 1	lb.	.35 @	.39
Ceresin, white	lb.	.10 @	.11
Montan, crude	lb.	.06 @	.06½
Ozokerite, black	lb.	.24 @	.25
green	lb.	.26 @	.30
Paraffine WhiteA.M.P.	lb.	.06 @	.06¼
Yellow A.M.P.	lb.	.06¼ @	—
Sweet wax	lb.	.12 @	—

SUBSTITUTES

Black	lb.	.08 @	.14
White	lb.	.09 @	.15
Brown	lb.	.10 @	.15
Brown factice	lb.	.09 @	.14
White factice	lb.	.08¾ @	.16

VULCANIZING INGREDIENTS

Black hyposulphite	lb.	.18 @	.20
Sulphur Chloride (drums)	lb.	.04½ @	.05
Sulphur flour			
Commercial bags,	cwt.	1.35 @	1.70
" bbls.	cwt.	1.70 @	—
Superfine, bags	cwt.	2.00 @	2.40
" bbls.	cwt.	2.40 @	2.90
100% pure, refined,			
bags	cwt.	2.25 @	2.55
bbls.	cwt.	2.60 @	2.90

The Market Place

WHERE TO OBTAIN

Machinery, fabrics, chemicals, compounding ingredients, crude and reclaimed rubber, consulting chemical and engineering services, etc.

ACCELERATORS—X L O and Diphenyl Guanidine.

Dovan Chemical Corp.

30 Church St. New York

CARBON BLACK—*Micronex* the world's standard gns black, universally known as the "King of Rubber Pigments."

Binney & Smith Co.

41 East 42nd St. New York City

CHEMICALS and compounding ingredients; Clay, Whiting, Accelerators, Mineral Rubber.

R. T. Vanderbilt Co.

50 East 42nd St. New York City

ACCELERATORS— Every lot is tested before shipment and a written guarantee of quality furnished.

Roessler & Hasslacher Chem. Co.

709 Sixth Ave. N. Y. City

CARBON BLACK

nine grades for the rubber industry.

Godfrey L. Cabot, Inc.

938-942 Old South Bldg. Boston
611 Metropolitan Bldg. Akron

CHEMICALS and pigments for the rubber trade. Complete stocks carried.

Wishnick-Tumpeer Chemical Co.

Chicago Cleveland Brooklyn

ANTIMONY Pentasulphide, golden and crimson, very fine, pure.

Rare Metal Products Co.
Tyler Patterson Co.

Belleville, N. J. Cleveland, Ohio

CARBON BLACK—*Aerfloted* Arrow Black for rubber compounding. Standard for grit-free uniformity.

J. M. Huber, Inc.

130 West 42nd St. New York

CRUDE RUBBER — All Grades. Washed - Dried - Milled. *Send us Your Inquiries.*

Gibraltar Rubber Corp.

West New York, N. J.

ASBESTINE—Specially prepared for use in Rubber. Send for liberal working sample.

SOLE PRODUCERS

International Pulp Co.

41 Park Row, New York City

CARBON BLACK — *Black Goose Brand*—free from grit and impurities.

Union Power Co., Inc.

Carbon Black Division
Shreveport, La.

DIXIE CARBON BLACK

Unexcelled in rubber work for toughness and resiliency.

United Oil & Natural Gas Products Corporation

30 Church St., New York City

BARYTES—Resists action of acids, alkalis, oils; 300 mesh.

National Pigments & Chemical Co.

St. Louis, Mo.

CARBONEX — Increases strength and durability of any compound while reducing the cost.

The Barrett Company

40 Rector St., N. Y. City

DRY KILN—for drying crude rubber and chemicals—Hunter Process.

Carrier Engineering Corporation

750 Frelinghuysen Ave. Newark, N. J.

BEAD CABLES— National Flat Woven and Pratt Patent Bead Cables.

National Standard Co.

Niles, Mich.

CHEMICALS— Solvents and accelerators. *Clay, whiting* and other compounding materials.

E. L. Bullock & Sons, Inc.

99 John St. New York City

FABRIC BROKER—Spots and Contracts: Tire fabrics, Enameling ducks, Tube Wrapping Tapes.

H. Frank Jones

395 Broadway New York City

CALENDERS—Embossing, for artificial leather, oil cloth etc.

Textile-Finishing Machinery Co.

83 Exchange Place, Providence, R. I.

CHEMICALS and compounding ingredients for the rubber trade.

Harshaw, Fuller & Goodwin Co.

Cleveland, Ohio

FABRICS—Tire fabrics, Egyptian—Peeler, Karded and Combed, Cord and Square.

Cabarrus Cotton Mills

(Cannon Mills, Inc.)

55 Worth St. New York
327 S. La Salle St. Chicago

THE MARKET PLACE Section Continued on Next Page.

ALL THE LEADERS

Are represented in this section. Purchasing agents can rely on the concerns listed as thoroughly reliable in every way.

The Market Place

FABRICS—Tire fabrics—coarse builders, chafers, breakers in all grades.
New England Southern Mills
LAWRENCE & CO.
24 Thomas St. New York
Boston, Philadelphia, Chicago, St. Louis, San Francisco

HEEL BURRS—with central holes; flat and cupped.
J. H. Sessions & Son
279 Riverside Ave. Bristol, Conn.

RECLAIMED RUBBER
A standardized grade for every requirement.
U. S. Rubber Reclaiming Co., Inc.
100 E. 42nd St., New York, N. Y.
"42 Years Serving the Industry Solely as Reclaimers"

FABRICS—Tire, cords, enameling ducks, drills, sheetings, osnaburgs.
J. H. Lane & Co.
250 West 57th St. New York City

LINERS — PROCESSED
For
Various Rubber Stocks
The Cleveland Liner & Mfg. Co.
5508 Maurice Ave., Cleveland, O.

RED OXIDE—A special grinding, guaranteed uniform in color and quality.
Joseph A. McNulty
114 Liberty St. New York City

FABRICS—Tire fabrics of every description, Sea Island, Egyptians, Peelers.
Taylor, Armitage & Eagles, Inc.
120 Broadway New York

METAL BRANDS, TAGS
Name Plates, Labels — Machinery for making.
Roovers Bros.
100 Schermerhorn St.
Brooklyn, N. Y.

RUBBER—Crude and scrap, all grades.
H. Muehlstein & Co.
Liggett Bldg. New York
Akron, Chicago, Boston, Hoboken

FABRICS—Stockinets, Jersey Cloth and Special Fabrics for the Rubber Industry.
U. S. Knitting Co., Inc,
Pawtucket, R. I.

MOLDS & CORES—Tire building machines; tire finishing stands; tubing machines; hydraulic presses.
The Akron Standard Mold Co.
Akron, Ohio

RUBBER SUBSTITUTES
White, brown and black.
Carter Bell Mfg. Co.
150 Nassau St. New York

FACTICE—Prevents blooming, makes colors fast and a smoother batch.
Stamford Rubber Supply Co.
Stamford, Conn.

MOLDS & CORES—for automobile tires; general machine work.
Kuhlke Machine Co.
Akron, Ohio

RUBBER TESTING APPARATUS
Bierer-Davis Rubber Aging Apparatus; Rubber Buffing Machine for preparing tensile strength samples.
Emerson Apparatus Co.
171 Tremont St., Melrose Highlands, Mass.

GUAYULE—"Duro" Brand washed and dried ready for compounding.
Continental Rubber Co.
120 Broadway New York

RECLAIMED RUBBER—
Uniformity, reliability, cleanliness.
Pequanoc Rubber Co.
Butler, N. J.

SANITARY GOODS —
Dress Shields, Reducing Garments, Sheetings, Aprons, Bathing Caps, etc.
I. B. Kleinert Rubber Co.
485 Fifth Ave., N. Y. City

HARD RUBBER, quality hard rubber goods of every description.
Vulcanized Rubber Co.
251 Fourth Ave. New York City

RECLAIMED RUBBER—
for all purposes.
Rubber Regenerating Co.
Naugatuck, Conn.

SOLVENT RECOVERY EQUIPMENT
50 to 90 Per Cent Recovery
Spadone Machine Co., Inc.
15 Park Row New York
Exclusive Selling Agents for
BENZINE CONDENSATION CO.

THE MARKET PLACE Section Continued on Next Page.

The Market Place

SOLVENTS — Accurately refined for the rubber industry.
Hartol Products Corporation
192 Market St. Newark, N. J.

TIRE BUILDING EQUIPMENT
MOLDS & CORES
The Akron Rubber Mold & Machine Co.
Akron, Ohio

SULPHUR—*"Tire"* Brand Superfine; *"Tube"* Brand Velvet; quality Sulphur for the rubber trade.
Stauffer Chemical Co.,
of Texas.
Seanlon Bldg. San Francisco, Cal. Houston, Texas Chauncey, N. Y.

VALVES— Tire valves, caps, insides, pressure gauges.
A. Schrader's Son, Inc.
Brooklyn, N. Y.

TAR—PINE, RETORT, KILN
All grades for the rubber manufacturer.
Pensacola Tar and Turpentine Co.
Gull Point, Florida

WHITING & PARIS WHITE
manufactured from *Genuine English Chalk* and *Cliffstone*—no adulterations.
Southwark Mfg. Co.
Camden New Jersey

TECHNOLOGIST — Testing, formulae, costs, litigation, experimental work on all classes of rubber products.
Fred'k. J. Maywald, F.C.S.
5 William St., Belleville, N. J.

ZINC OXIDES—A Z O, the Super Zinc.
American Zinc Sales Co.
P. O. Box 1428 Columbus, O.
Pierce Bldg. St. Louis
Prudence Bldg. New York

THERMOMETERS–Recording, controlling temperature and pressure controllers.
American Schaeffer & Budenberg Corp.
Berry & South Fifth Sts., Brooklyn

ZINC OXIDES — Including KADOX and "Albalith."
The New Jersey Zinc Sales Company
New York Pittsburgh Chicago
Cleveland San Francisco

Crude Rubber

NEW YORK, Jan. 15, 1925

Crude rubber received its first setback since the start of the upward swing in prices several months ago on the 5th when losses of one full cent a pound were recorded in New York and London declined ½d to ¾d. Strangely, manufacturing demand was the best in two weeks; this pointed to manipulation of the market in London where the weakness began. The decline continued on the next day, the market losing ¾c per pound. Then a rally brought prices at the close to the previous day's levels.

Losses of over 1½c a pound sent rubber prices back to near the 38c level on the 8th and the tone of the market was very dull and easy. The next day found a momentary buying flurry coupled with the advancing exchange rate. Sellers' prices were up ⅝c per pound, making spot to June arrivals of plantation sheets and crepe 38⅞c. Inquiry was quite brisk but when prices started climbing it numbed buyers' interest.

During the next few days the market was quiet and without interesting features. When London lost ⅝d values declined in sympathy here and buyers shied at the market. At the close on the 12th sellers were unable to interest Western consumers at 38¼c on any of the deliveries from spot to June. The surprise of the day was the increase in London stocks after a long series of uninterrupted declines since last summer. The increase was 435 tons, making total stocks 29,637 tons. Shipments from Singapore during the month of December totaled 18,338 tons, destined to the United States. This does not include direct shipments from the other Eastern ports so that the outlook for the month of February as far as arrivals are concerned, will probably be around 27,000 to 28,000.

Bearish news from abroad caused the market to break sharply the next day to 36½c. When a large buyer snapped up everything available at that figure the market turned a little steadier late in the day only to weaken again at the close. A forward movement in London on the 14th restored confidence and improved values, although the close again saw prices weaken. Up to 37¼c was paid for spot to June deliveries of sheet and crepe during the session.

On the 15th the market showed still further declines. Ribbed smoked sheets dropped 1⅞c but reactions were momentarily expected.

NEW YORK MARKET

Plantations—			
Ribbed Smoked Sheets.			
Spot	.35	@	—
January	.35	@	—
February-March	.35	@	—
Apr.-June	.35	@	—
First Latex, crepe, spot	.35	@	—
Amber Crepe No. 1, spot	—	@	—
" " No. 2,	.34¾	@	—
" " No. 3,	.34½	@	—
Brown Crepe, Rolled	.34	@	—
" " Clean, thin	.34½	@	—
" " Specky	.34¼	@	—
Scrap, Colombo No. 1	—	@	—
Pontianac—			
Bangermassin	.06½	@	.07½
Palembang	.08	@	—
Prime Pressed	.13¼	@	.13¾
Sarawak	.07½	@	.08
Paras—			
Up-river Fine	.35	@	—
" Medium	.33	@	—
" Coarse	.28	@	—
Islands, fine	.32½	@	—
Madeira Fine	.35½	@	—
Acre Bolivian, fine	.33	@	—
Cut Beni Bolivian, fine	nominal		
Tapajos, fine	.32	@	—
Caucho Ball—			
Upper, shipment	.29½	@	—
Centrals—			
Central, scrap, prime	.24	@	—
Corinto, scrap	.22¼	@	—
Esmeralda, sausage	.24	@	.25
Guayule, w and d	.33	@	—
Africans—			
Benguela, No. 2	.17	@	—
Congo, upper, black	.26	@	—
" " red	.25	@	—
Kassai, Prime Red	.23	@	.24
Balata—			
Block, Colombia	.48	@	.50
" Cuidad	.62	@	—
Surinam, sheet	.75	@	.79
Gutta Percha—			
Siak	.17	@	.18
Red Macassar	3.00	@	3.20
Chicle—			
Mexican, Yucatan	.64	@	.68

LONDON MARKET

Standard Ribbed Smoked Sheets—	
Spot	17 d
February	17
March	17⅛
Apr.-June	17⅛
July-September	16⅝

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—	
Spot	16¼d
February-March	16½
Apr.-June	16⅛
July-September	15⅛